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ABSTRACT

The instruction manual contains lessons for teaching severely physically and/or neurologically handicapped students to use the seven-key Cybertype electric writing machine. Unlike the 14-key keyboard, which requires bilateral coordination in arms, legs, or other parts of the body, the seven-key keyboard requires the use of only one part of the body, such as a single limb. The seven-key keyboards are operated by touching two keys, constituting a pair, sequentially. The instruction manual explains the possible configurations of Cybertype keyboards and the codes which identify the different keying positions. Fifteen lesson plans for seven-key dual-sequential keyboard are presented. Teaching guidelines are accompanied by training exercises and practice sentences. Over half the document consists of supplementary typing exercises and practice material. (See also EC 030 060, EC 050 266-050 268, EC 050 270.) (KW)

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STUDY OF MAN-MACHINE COMMUNICATIONS SYSTEMS FOR DISABLED PERSONS (THE HANDICAPPED)

VOLUME VI

HAIG KAFAFIAN

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June 19, 1971

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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C/R/I FINAL REPORT

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EXPERIMENTAL INSTRUCTIONAL MATERIALS FOR C/R/I FIELD CENTERS

Volume VI

HAIG KAFAFIAN

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INSTRUCTION MANUAL FOR 7-KEY "CYBERTYPE" MAN-MACHINE COMMUNICATIONS SYSTEM

First Edition

This volume together with those listed below comprise the series of reports, demonstration guides, evaluative procedures, and instructional and training materials prepared under Project Nos. 7-0533 and 18-2003, Grant No. OEG 2-7-070533-4237 (607), for the Bureau of Education for the Handicapped, Office of Education, Department of Health, Education, and Welfare.

C/R/I Interim Report, 1968	Interim
C/R/I Second Report, 1970	Volumes I and II
C/R/I Final Report, 1971	Volume III
C/R/I Demonstration Guide and Materials	Volume IV
C/R/I Instruction Manual for 14-Key "Cybertype" Man-Machine Communications System . . .	Volume V
C/R/I Instruction Manual for 7-Key "Cybertype" Man-Machine Communications System. . . .	Volume VI
C/R/I Instruction Manual for a "Cybertype" Tongue-Body Interface Man-Machine Communications System	Volume VII

A master errata sheet will be compiled from these volumes, and sent to their recipients. Your suggestions and help will make the experimental volumes more useful to researchers, teachers, and other readers, and will be of great value in preparing any revisions.

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PREFACE

INSTRUCTION MANUAL FOR

CYBERTYPE® MAN-MACHINE COMMUNICATIONS SYSTEM

7-KEY INTERFACES

This first edition of the Instruction Manual for the 7-key "Cybertype" interfaces was designed as a guide for introducing the keying-codes and experimental teaching programs to researchers and teachers at the C/R/I Field Centers working with severely physically and/or neurologically handicapped students who have the cognitive resources to learn, who know the English alphabet, and who have comprehension of word formation and sentence structure.

The introductory section includes, among others, descriptions of various types and configurations of "Cybertype" interfaces or "keyboards" and codes which assign letters, symbols, and typewriter functions to the keying positions of the interfaces. Illustrations of keying positions, and the organization of lesson plans are presented.

Lesson plans for Cybertype® instruction and a set of Supplementary Instruction Materials are also part of this Instruction Manual. The teacher is encouraged to modify the contents in order to meet the students' requirements. The format is straightforward and can be followed in the event changes are made.

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C/R/I INSTRUCTION MANUAL FOR CYBERTYPE™ COMMUNICATIONS SYSTEMS*

INTRODUCTION

Physically handicapped children and children with neurological dysfunctions are often unable to provide the muscular coordination and dexterity necessary to communicate in written form, either by handwriting or by operating the 49 keys of an ordinary electric typewriter. These handicaps especially when accompanied by language impairments and specific learning disabilities, severely impede further development of intellectual and verbal potentialities. As a result, many multiply handicapped individuals, especially children who potentially have the intellectual competence to become self-sufficient contributing members of society, are institutionalized because their motor capabilities appear too limited for independent and practical functioning.

In spite of the apparent hopelessness of many children with multiple handicaps, it has been demonstrated that it is often possible to employ cybernetic systems which permit use of the individual's remaining motor capabilities.

Cybernetics Research Institute (C/R/I) is presently conducting

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*This Instruction Manual is intended for research purposes only, and is not intended to represent the final version which is in the process of being developed.

1. Kafafian, Haig. Study of Man-Machine Communications Systems for the Handicapped. U.S. Office of Education, Bureau of Education for the Handicapped, Project No. 7-0533, C/R/I Interim Report, August 19, 1968.
2. Kafafian, Haig. Study of Man-Machine Communications Systems for the Handicapped. U.S. Office of Education, Bureau of Education for the Handicapped, Project No. 18-2003, C/R/I Second Report, February 19, 1970.

research for the purpose of studying severely disabled students' ability to communicate by means of the CYBERCOM™ family of man-machine systems. Children who have the cognitive ability but whose other disabilities preclude cursive writing or operation of ordinary typewriters are being studied through observation and testing. Where possible, man-machine systems are provided to the students with interfaces which match the students' remaining performance characteristics, thereby enabling them to operate electric writing machines and/or other communication and control systems.

The materials presented in the C/R/I Instruction Manual are also intended to serve the teacher of exceptional children as an introduction to a teaching guide for "Cybertype" man-machine communications systems, and provide them with an organized program of instruction for these systems together with appropriate training, testing and exercise materials. The C/R/I Manual is also intended for use as a guide in teaching children individually or in groups. Care should be taken in selections of the appropriate interface or "keyboard" and special instructional materials, if necessary. Substitute exercises and other special materials, if needed, should be determined by the teacher or researcher.

Description of Basic "Cybertype" Keyboards or Interfaces *

The basic characteristics underlying the "Cybertype" system involve the concept of "dual-input". That is, instead of requiring operation of one key at a time to produce typed letters, symbols, or functions, as with an ordinary typewriter keyboard, the "Cybertype" systems operate from dual-inputs which may be bilaterally or unilaterally controlled.

Two inputs must be provided, that is, two keys (or one key which serves the purpose of two keys) are operated at one time, or they may be operated in sequence. Although dual-input operation may seem unusual at first, as compared to single-input operation, dual-input systems offer the advantages of simplified keyboard arrangement and flexibility permitting interface matching to the performance characteristics of the human operator. Another advantage, and an important one, is that the

*The term "interface" here refers to the keyboard or control mechanisms which are the point of contact between user and typewriter. In the case of an ordinary electric typewriter, the keys of the 49-key keyboard may be identified as the "interface". With a "Cybertype" system, which is for a typewriter or other office or computational machines, the 14-key, 7-key, or 2-key keyboards or single-key control, or other interface configurations constitute the interface.

keying code is easy to remember. With a little practice, the users do not have to refer to charts or marked keys once they have learned the code. Only two basic coding relationships are necessary to remember, e.g., 1 and 1 for the typewriter"space"function, 1 and 2 for the letter E, 1 and 3 for the letter T, 1 and 4 for the letter A, etc.

Interface Configurations

One configuration of the 14-key "Cybertype" keyboard interface consists of 14 finger or prostheses-operated keys, arranged in two groups of 7 keys each, as shown in Figure 1. Typically, key-tops on this type of interface are 1/2 x 1/2 inch in size, with a lateral separation between keys of one inch center-to-center. For purposes of identification, keys are numbered from 1 to 7 in right and left hand banks (See Figure 1). This numerical identification of keys should be remembered, since it will be referred to frequently in this Manual. Some keyboard interfaces include an ON/OFF toggle switch and pilot light, as shown in Figure 1.

The 14-key keyboard is electrically connected to an electric typewriter which provides the printed output. Each letter, symbol or function to be produced is assigned to a pair of keys, one key in each of the two banks.

In this configuration of the dual-input interface, two keys are operated together using a finger of the right hand for the keys identified as the "Function Keys" or the right bank of keys, and a finger of the left hand for the left bank identified as the "Control Keys." It has been found that many students who lack the manual coordination and dexterity necessary to strike individual keys on the 49-key interface of an ordinary typewriter, can, with little difficulty, strike pairs of keys on the 14-key, dual-input interface, using one finger of each hand, prostheses,or other parts of the body when, larger keyboards are used. The small area to be covered, the minimum number of keys on the interface, the large key-tops and spacing of keys, the ease of learning the keying positions, and the minimum coordination required, bilaterally or unilaterally, are all factors which may contribute to the ease with which the "Cybertype" can be operated by individuals who are physically and/or neurologically disabled,but who have the cognitive and sensory capabilities.

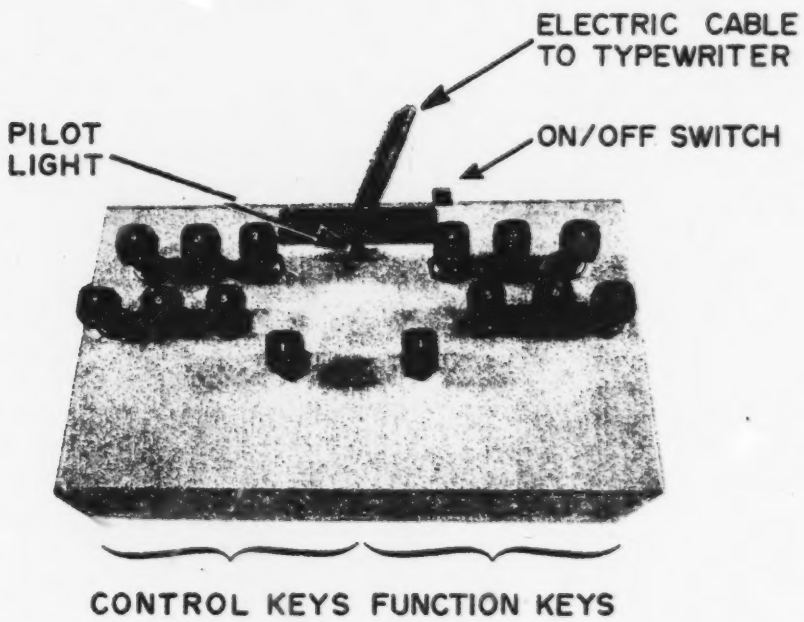
Interface Coding

The code assigning letters to pairs of keys of most of the interfaces is based on the frequencies of letter usage in the English language. Although various studies have revealed slight differences in letter frequencies, the "Cybertype" code described in this Manual is based on the following order of letters from most frequent to least frequent:

E T A O N I R S H D C L M U F P Y B G W V J K Q Z X

Figure 1

"Cybertype," 14-Key, Dual-Input
Interface for Finger Operation



For a right hand dominant individual, each of the six most frequently used letters (E-T-A-O-N-I) and the typewriter "space" function can be produced by activating one key on each side of the keyboard. As shown in Figure 2, these letters and functions are produced by activating Key No. 1 of the left bank of keys, combined with individual keys of the right bank. For identification and descriptive purposes as noted earlier, the seven keys on the left side of the interface are referred to as "Control Keys" and the seven keys of the right group are referred to as "Function Keys" (Figure 1).

The other letters and the "period" are assigned to the second, third, and fourth control keys on the left side of the interface, paired with "Function Keys" of the right-hand bank (Figure 2). Numerals, other symbols and typewriter functions are assigned to "Control Keys" 5, 6, and 7 (see Figure 3).

The assignment of certain typewriter symbols, such as "!" and "+" depends on the model of typewriter used with the "Cybertype." The code for numerals, symbols, and functions shown in Figure 3 applies to the IBM* "Selectric" typewriter with "Prestige Elite," "Courier," "Letter Gothic," or "Delegate" type styles. The code for the IBM Models C and D differ slightly.

Through the use of a "code-reversal junction box," which connects the interface(s) to a "cybertypewriter," the key assignments for left and right-hand key groups can be interchanged, for operation by a left-hand dominant individual.

This Instruction Manual is meant for right-hand dominant individuals, and the "Control Keys" on the left side of the interface and "Function Keys" on the right side should be "reversed" if the students are left-handed. Thus, for a left-hand dominant student, the teacher may use the "code-reversal junction box" in place of the usual junction box, thereby shifting the "Control Key" positions to the right side and the "Function Keys" to the left side of the "Cybertype" keyboard. It is important to note that no data is available at this time to support this reversal and teachers may be guided accordingly.

Other Interface Configurations

Interface configurations other than the 14-key, finger-operated keyboards are employed where they more effectively match the remaining performance capabilities of the individual. For example, many persons lack

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*Trademark - International Business Machines Corporation, Armonk, N. Y.

Figure 2

Keying Positions for Letters,
Typewriter Space, and Period
with the "Cybertype," 14-Key Interface

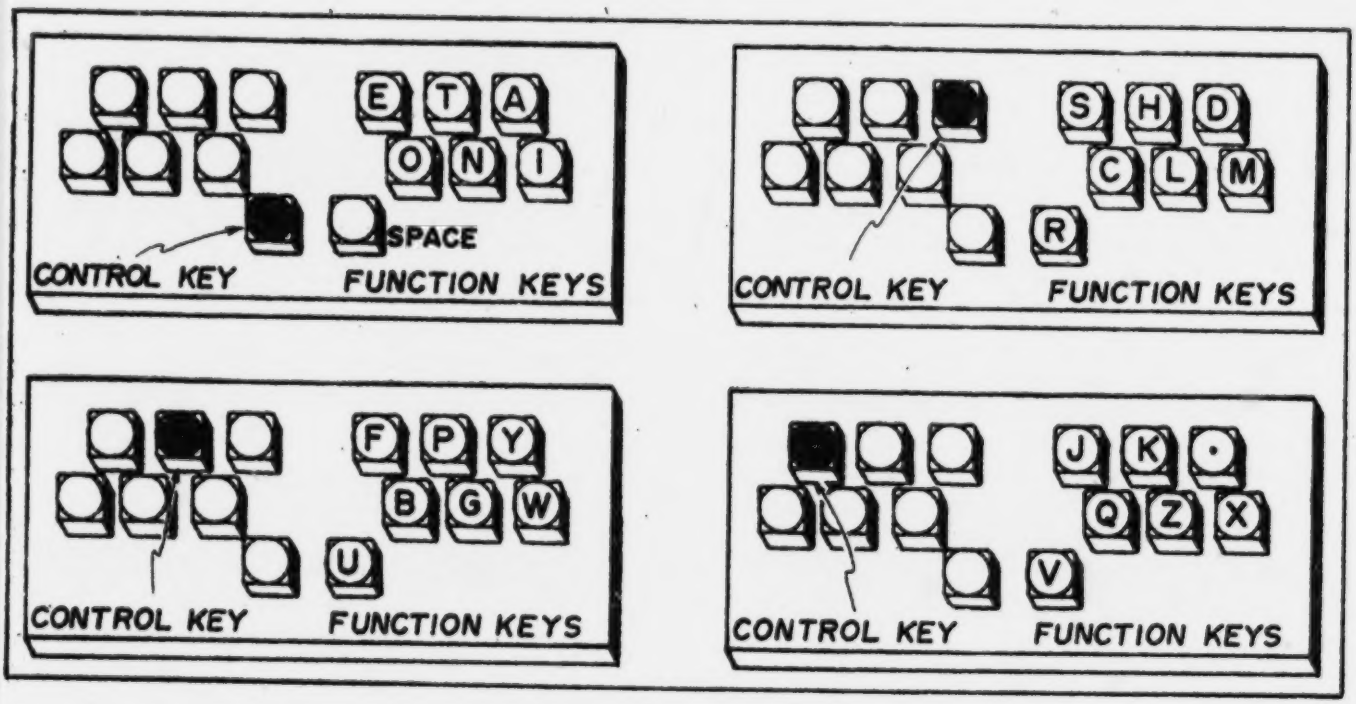
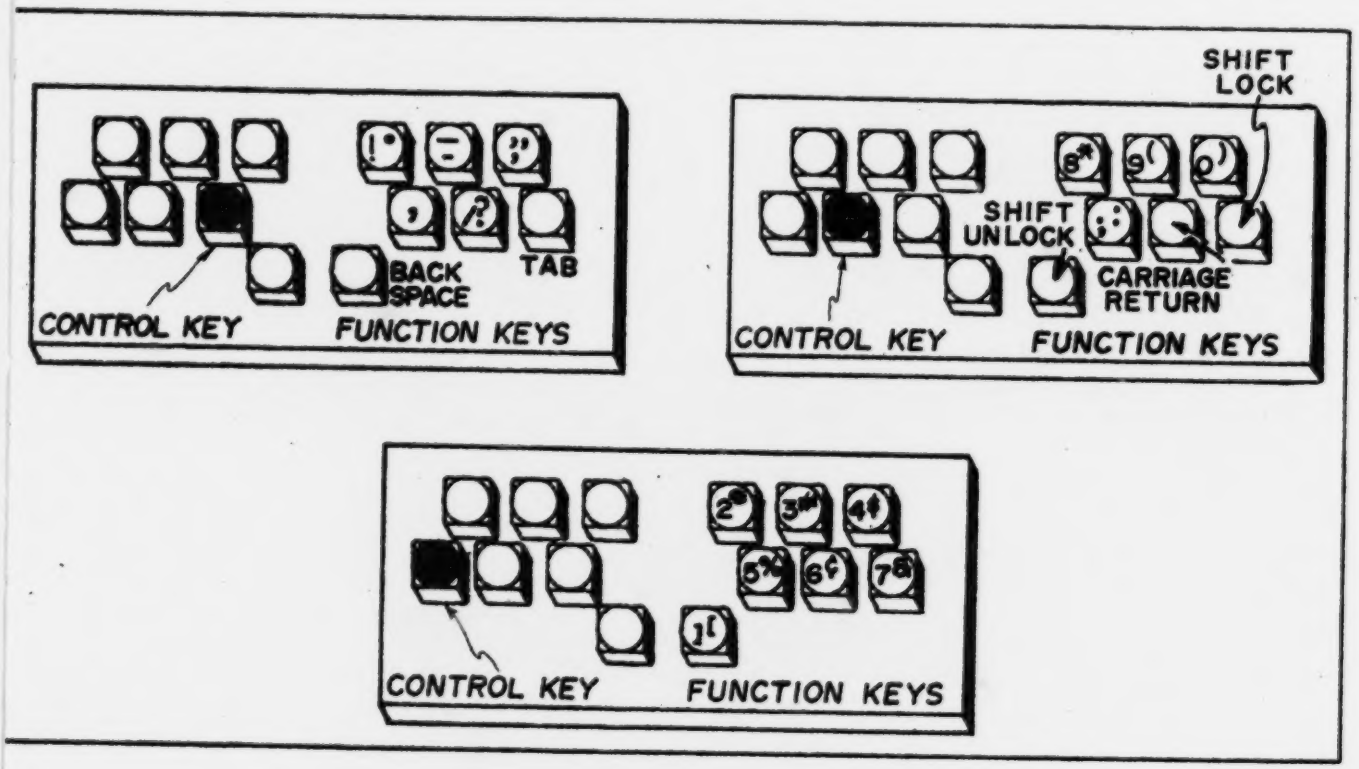


Figure 3

Keying Positions for Numbers,
Symbols, and Typewriter Functions
with the "Cybertype," 14-Key Interface



the coordination and dexterity necessary to operate keys with their fingers, but retain some control to provide gross motor coordination in hands and arms. They may be provided with "fist-controlled" interfaces, one configuration of which consists of 14 large keys with wide spacing,and key-tops with a diameter of one inch and a lateral separation between keys (center-to-center) of two and a quarter inches (see Figure 4). This configuration can be operated with the parts of the upper limbs, e.g., thumbs, fingers, fists, or heels of the hands.

Another type of interface, the "foot-keyboard," consists of key-tops with a diameter of one and a half inches,and a center-to-center lateral separation of three inches (Figure 5). These interfaces can be operated with the fists, heels of the hands, or other parts of the body by persons whose manual coordination is not sufficient for the smaller fist keyboard. In addition, they can be operated with the feet by individuals with virtually no ability to coordinate arm movements, or by upper-limb amputees. For foot-operation, the interface is placed in an appropriate position,either on the floor or a stand, with the user seated in a chair adjusted to the proper height so that the weight of the legs is supported by the edge of the seat, and feet "float" just at the level of the key-tops. In this position, keys can be actuated by simple toe depressions.

Since the configuration or spatial arrangement of keys in these interfaces is similar to that shown in Figure 1, the letter-keying code is as shown in Figures 2 and 3.

The Cybertype Unilateral Keyboards

Individuals who are unable to provide controlled bilateral coordination in arms, legs, or other parts of the body, employ the dual-input sequential interfaces, which consist of seven typing"Function Keys" and a "reset" or "correction" key. These interfaces require the use of only one part of the body, such as the tongue, a single limb, or other portion of the body which can be controlled.

The 7-key keyboards, two versions of which are shown in Figure 6, may be operated by actuating two keys, constituting a pair, sequentially. The first key depressed may be considered to correspond to the left bank or the "Control Key" side of a 14-key interface,and the second key depressed to the right bank or "Function Key" side of a 14-key interface. Thus, striking Key No. 1 followed by Key No. 2 will produce the letter "E." As with a 14-key interface, there are 7 x 7 or 49 possible pairs of dual-inputs which allow production of all the characters and functions available on the typewriters used. See Figure 6.

Figure 4

"Cybertype," Dual-Input Interface for
Fist or Hand Operation

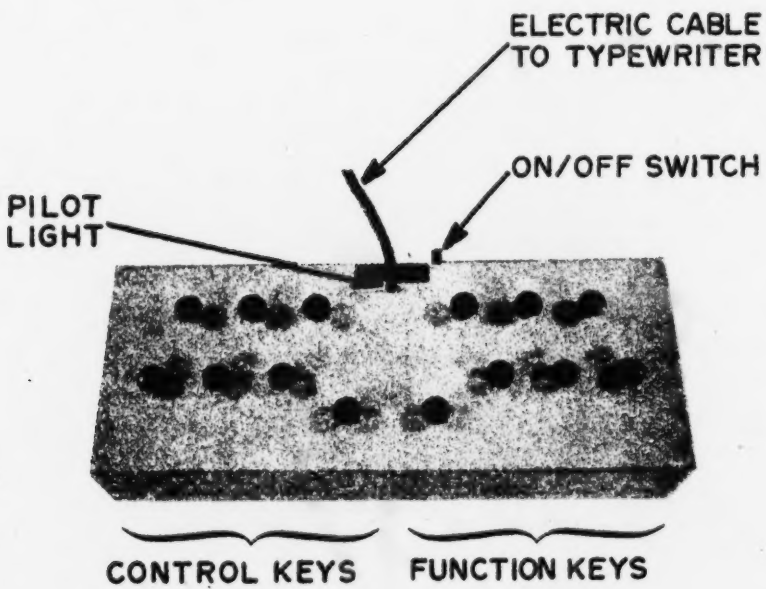


Figure 5

"Cybertype," Dual-Input Interface for
Fist or Foot Operation

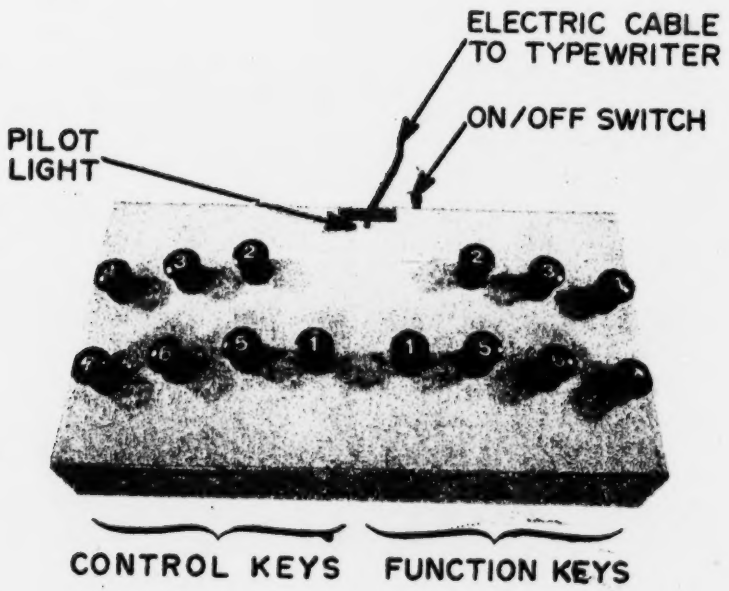
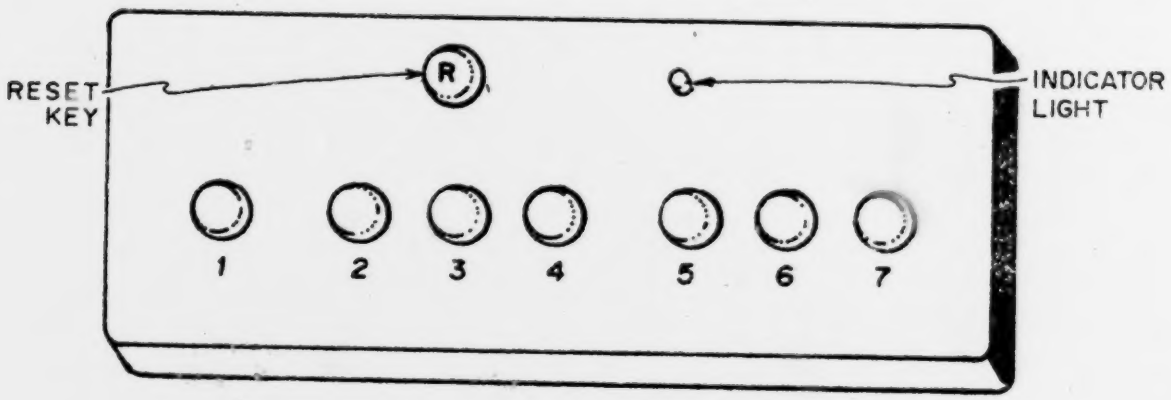
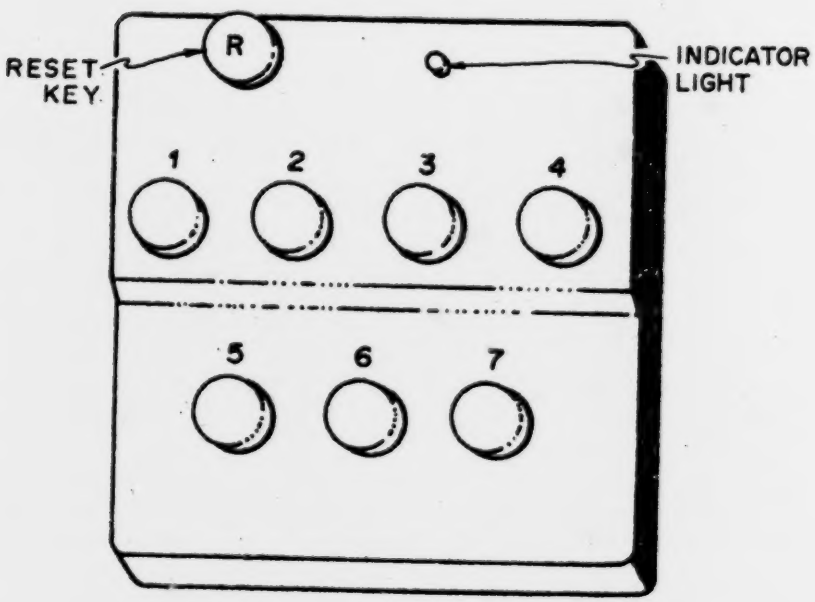


Figure 6

"Cybertype," Dual-Input Sequential Interface
for Operation with a Single Limb



a) Dual-Input Sequential Interface: Single Row



b) Dual-Input Sequential Interface: Double Row

Figure 7

Letter-Keying Code for 7-Key, Dual-Sequential Interface

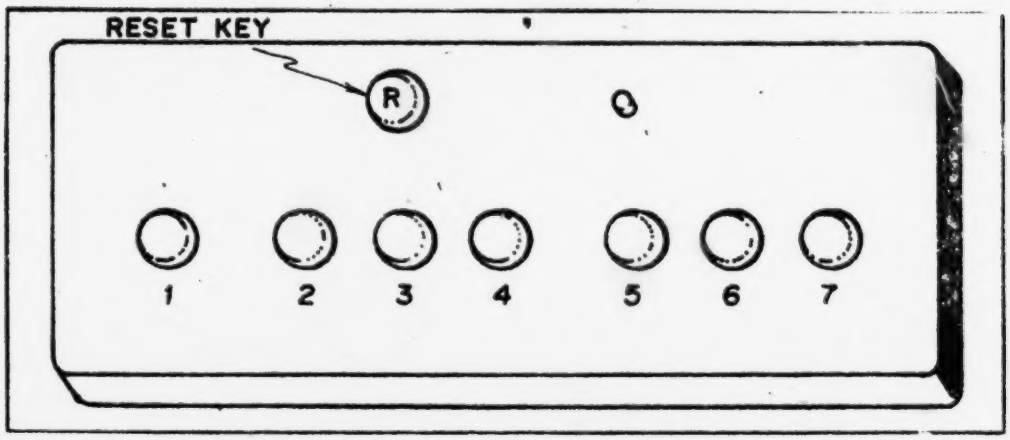


Diagram of 7-Key, Dual-Sequential Interface

Typewriter Functions		Dual-Sequential Keying Code First and Second Key Nos.
LC*	UC**	
Space		1, 1
e	E	1, 2
t	T	1, 3
a	A	1, 4
o	O	1, 5
n	N	1, 6
i	I	1, 7
r	R	2, 1
s	S	2, 2
h	H	2, 3
d	D	2, 4
c	C	2, 5
l	L	2, 6
m	M	2, 7

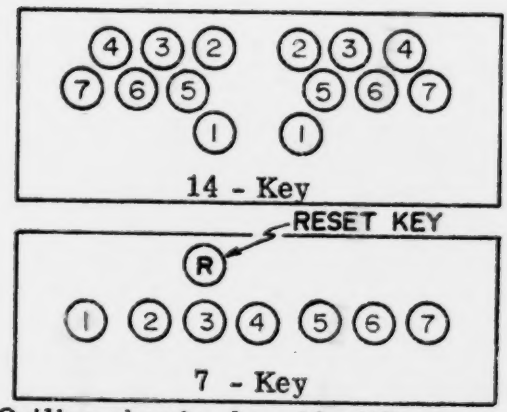
* Lower Case
**Upper Case

Typewriter Functions		Dual-Sequential Keying Code First and Second Key Nos.
LC*	UC**	
u	U	3, 1
f	F	3, 2
p	P	3, 3
y	Y	3, 4
b	B	3, 5
g	G	3, 6
w	W	3, 7
v	V	4, 1
j	J	4, 2
k	K	4, 3
.	.	4, 4
q	Q	4, 5
z	Z	4, 6
x	X	4, 7
Back Space		5, 1
!	°	5, 2
-		5, 3
'	¨	5, 4
,	,	5, 5
/	?	5, 6
Tab Function		5, 7
LC* ("Shift Unlock")		6, 1
8	*	6, 2
9	(	6, 3
0	)	6, 4
;	:	6, 5
Carriage Return		6, 6
UC* ("Shift Lock")		6, 7

* Lower Case
**Upper Case

Typewriter Functions LC*	UC**	Dual-Sequential Keying Code First and Second Key Nos.
]	[	7, 1
2	@	7, 2
3	#	7, 3
4	$	7, 4
5	%	7, 5
6	¢	7, 6
7	&	7, 7

* Lower Case
**Upper Case



Outline showing key-identifications 7 and 14-Key Keyboards

If the incorrect "Control Key" is depressed inadvertently, the "reset key," which is located near the rear edge of the interface as shown in Figure 6, may be struck in order to clear the system immediately. After the "reset key" is depressed, the correct first key of the key-pair can be actuated, followed by the keying of the second key of the key-pair assigned to the desired letter. If there is an error on the first key struck, "automatic correction" may be achieved without use of the "reset key." All that is required is that the user wait until the red "indicator light" located on the keyboard goes out.

The red "indicator light" (shown in Figure 6) is always illuminated upon initial striking of the first key of each key-pair keying combination. When the second key of the key-pair is actuated, the typed response or typewriter function occurs and the "indicator light" goes out by itself.

The letter-keying code for the 7-key, dual-sequential interface is equivalent to that for the 14-key systems, and is shown in Figure 7. The 7-key interface configurations offer considerable flexibility and can be operated not only with a fist, foot, or tongue, but also with a "unicorn," a helmet-mounted stick, or "mouth stick." The interface shown in Figure 6b (4 keys in the upper row, 3 keys in the lower row) consists of somewhat larger key-tops and is suitable for operation by persons who have limited control.

The styles and types of keyboards or interface configurations for use

with the "Cybertype" writing machines are almost unlimited. Variations of muscle and body-controlled transducers or keyboards operable from signals generated by the central nervous system, tongue-controlled keyboard, "joy-stick," glove, and lever-actuated switches,together with numerous other interface configurations operable with the aid of prostheses or ortheses can be selected to match the remaining motor capabilities of the disabled person.

Organization of Lesson Plans

This Instruction Manual is organized into 15 lessons. Each lesson should generally last about one hour, and one lesson should be given each day, four or five days a week. This is based on the experience of teachers who have had a high degree of success with their students, all of whom have been children with multiple impairments.

When working with a group of students, a prerequisite is that the teacher, with the aid of each student,select the appropriate interface out of the set of interfaces provided with the system. If only one writing machine in the classroom is available, all of the students' and the teachers interfaces may be connected to it, as shown in Figure 8. Children may be introduced as a group or individually to the teacher's demonstration of the keying positions of the appropriate keyboard or interface. They should practice operating the interface selected for their use following the procedures enacted by the teacher.

During these group practice sessions, those interfaces which are not used to operate the "Cybertypewriter" are either disconnected from the junction box or if equipped with switches, they are turned off. Each student can then be given individual attention in practicing the exercises which accompany each lesson, with or without activating the"Cybertypewriter." At individual practice sessions the student's interface switch is connected to the junction box or turned "on," so that the desired exercises are typed.

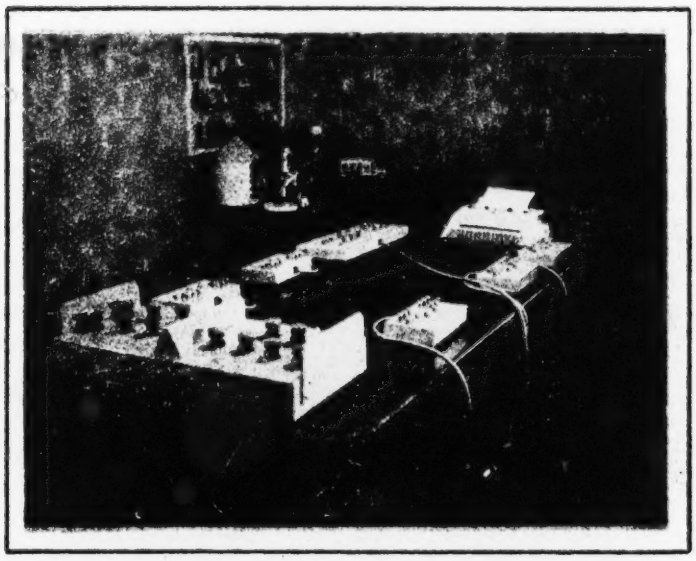
In the meantime, other students whose interfaces are turned "off" are not precluded from practicing; they may practice their exercises by "keying" their interfaces, even though no typewritten output is obtained. Ordinarily, more than one"Cybertype"should be in the classroom,and the teacher can observe each member of the group and obtain typewritten copy for each student in the group by looking at the monitor "Cybertype."

Cyber-Circus Story

The Appendices to this Manual include a "mnemonic" or memorization aid called the "Cyber-Circus Story." The characters and events in this story are related to letters and symbols and to their "Cybertype" keying positions.

Figure 8

A Variety of "Cybertype" Interfaces
Connected to a Single Electric
Typewriter for Group Instruction



This story has power to be a valuable aid to memorization with the subjects tested. It appears to develop enthusiasm and increase the student's motivation in learning to use the "Cybertype" and perform more effectively in their other activities. The story is compatible with the lesson plans in this text.

Supplementary Materials

The Appendices include a "Supplementary Materials" section which provides practice exercises to be used in augmenting the exercises included with each lesson. The teacher may review the Supplementary Materials section and select appropriate exercises which would serve as additions to the regular lesson plans.

It is recognized that students' age levels, cognitive, motor, and sensory capabilities contribute toward their rate of progress. The teacher is encouraged to constantly consider these factors and employ a teaching plan which will have the greatest probability of being effective for a particular student or group of students. It should be remembered that all of the experimental instruction materials were developed for a research study and evaluation program, whose principal objective was to determine the feasibility of the "CYBERCOM" man-machine communications systems.

THE C/R/I "E-T-A" ALPHABET CHART

The "E-T-A" ALPHABET CHART consists of a sequence of letters of the English alphabet derived from a composite of letter-frequency analyses[1] of English language texts. Its purpose is to acquaint the learner of "Cybertype" interfaces or keyboards with the letters of the alphabet, sequentially commencing with letters E, T, A, etc., in order of decreasing frequency usage.

It has not been determined whether more rapid learning of keying codes with retention and reinforcement through introduction of the most frequently used letters is accomplished by introducing letters in this manner, rather than A, B, C, etc.

The "space" function appears initially in the chart since it is most frequently used when typing.

"Space"	H	B
E	D	G
T	C	W
A	L	V
O	M	J
N	U	K
I	F	Q
R	P	Z
S	Y	X

[1]Kafafian, (C/R/I Interim Report, 1968.)

LESSON PLANS

FOR THE

7-KEY (DUAL-SEQUENTIAL) INTERFACE

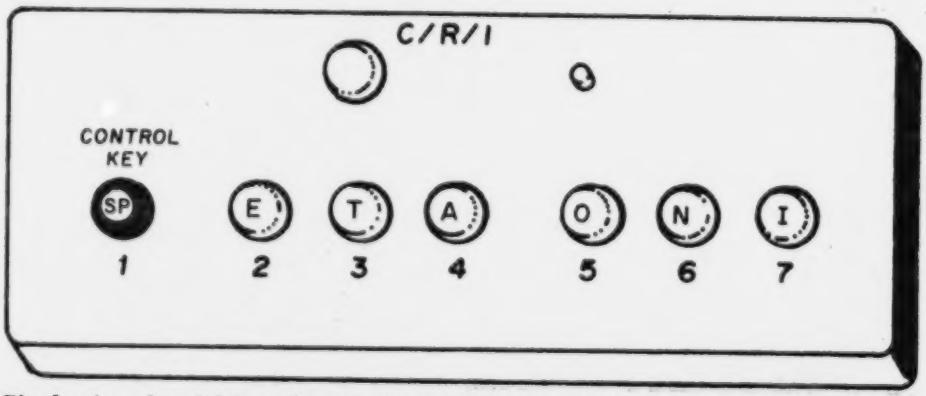
Lesson No.	Page
1	20
2	23
3	25
4	29
5	31
6	33
7	37
8	40
9	42
10	46
11	48
12	50
13	55
14	61
15	65

LESSON 1

Before teaching students any of the "Cybertype" letter-keying associations, introduce them to the equipment by explaining how it operates. One way to simplify this task is to demonstrate the similarity of keys on the keyboard to an electric light switch. For example, point out that when a switch is turned on, somewhere in the room a light appears. Similarly, when keys of the "Cybertype" keyboard are depressed, signals are sent through an electric cable to the typewriter which types letters and symbols. Modifications of this explanation can be devised according to the age group under consideration.

Teachers are urged to review the C/R/I Second Report* for details and descriptions of the initial "Cybertype" instruction programs.

The functions to be introduced in this first lesson are: "Space," E, T, A, O, N, I. Note that Control Key No. 1 in coordination with the other keys is used to produce these characters. The interface diagrammed in these lessons is the one with a single row of seven keys (Figure 6a, page 12), but the same numbered key sequences are used for the interface in Figure 6b, page 12 (top row of 4 keys, bottom row of 3 keys).



Students should be shown the locations of these seven functions (in the order presented above), and should be given time to copy the "Dexterity Exercises" found on the student practice sheet (page 22). The practice exercises are provided on separate pages for your

*Available from the Librarian, Cybernetics Research Institute, Inc., 2233 Wisconson Avenue, N.W., Washington, D.C. 20007.

convenience. If desired, these pages can be reproduced and presented to students for copying. If you are working with a group of children, copies of these exercise sheets should be provided for each student.

The "Dexterity Exercises" are designed to give students practice necessary in learning which keys produce which letters. Since repetition is important in learning the letter-keying associations, each student should practice the exercises until he has thoroughly memorized the code for letters presented in the lesson.

After memorization, proceed to the "Practice Sentences" in Part 2 of the exercise sheet, and have each child type each sentence in the order shown. This part of the lesson gives students a chance to learn how their keyboards can be used to produce printed words in the context of meaningful sentences.

Note that the exercises in this lesson are presented in capital letters. Therefore, it is advisable to put the typewriter in the "upper case" (Shift Lock) position so that the letters produced by students will resemble those on their exercise sheets. In a later lesson (Lesson 7), students will learn how to shift between upper and lower cases using their keyboards.

Also note that since students have not yet learned how to operate the typewriter Carriage Return function, you should do this for them, when necessary, by depressing Key No. 6 twice in succession (see page 23).

LESSON 1

1. Dexterity Exercises

EEE	TTT	AAA	OOO	NNN	III
AAA	III	TTT	NNN	EEE	OOO
EO	EO	OT	TN	AT	TI
IAN	TOA	EOT	NAI	ONO	ITO

2. Practice Sentences

EAT ONE

I ATE ONE

ANN ATE NINE

TEA AT NOON

IN A TENT

TEA AT TEN

I ATE AN ONION

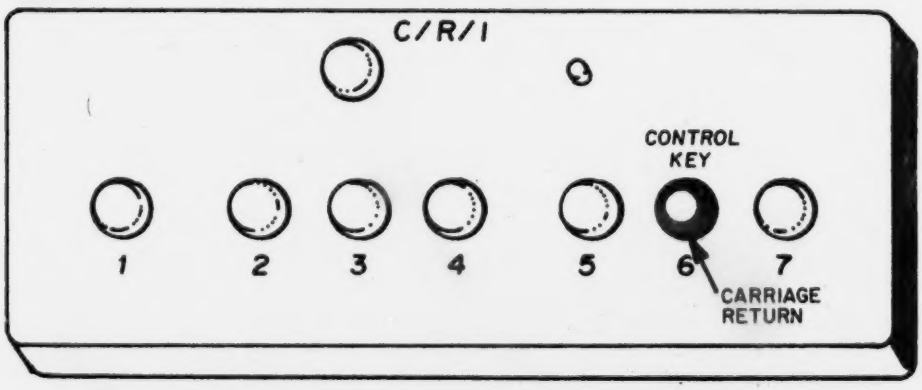
LESSON 2

This lesson is a review of the typing functions learned in the first lesson: "Space," E, T, A, O, N, I. It is important for students to master the keying positions for these functions before proceeding further.

Have students copy the words and phrases provided at the top of the exercise sheet for this lesson. This practice should reveal the extent to which children have remembered functions learned in the previous lesson. If additional practice is necessary, use the exercises for Lesson 1, then return to the "Copy Words and Phrases" for this lesson.

The questions in Parts 2 and 3 on the exercise sheet are designed to stimulate the children's imagination. Students should answer these questions in their own words and to the best of their ability. However, at this early stage, it may be necessary for you to provide some "coaching" or suggestions for these creative exercises.

At this time, introduce the carriage return function to the students.



Demonstrate the keying position for this function and, if necessary, explain the purpose of the carriage return. The carriage return function may be explained to young children as "the mechanism on the typewriter that rolls the paper to a new clean line so that you can continue typing."

Have students practice the carriage return keying position a few times, and thereafter have them use it appropriately when they wish to type a new line of print on the paper.

LESSON 2

1. Copy Words and Phrases

OAT	ONE TOE
NONE	TEN ATE
EATEN	TEA TOO
TON	IN AN INN
AN ANT	EAT AN ONION
NOT ONE	NOON TO ONE

2. What numbers can you spell using only the letters E-T-A-O-N-I? Type them.

3. How many words can you make using only the letters E-T-A-O-N-I? Type them. (You may use the same letter more than once in a word.)

LESSON 3

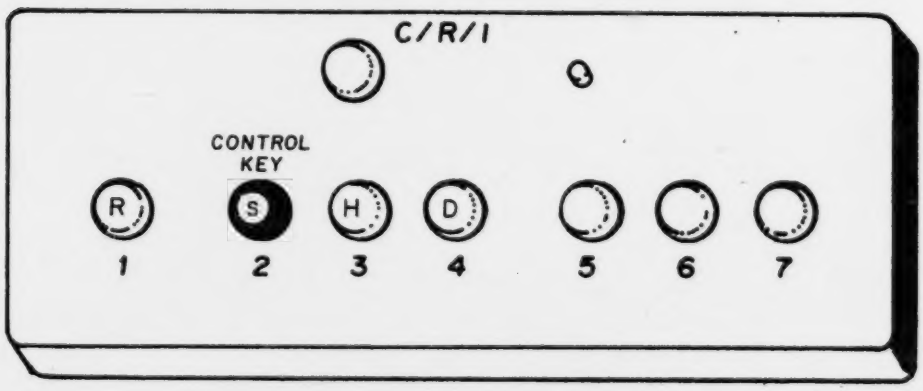
The first "Training Exercise Test" (Training Exercise No. 1 on page 27) should be administered at the beginning of this lesson. It is best to precede the test with a brief review of "Space, E, T, A, O, N, I."

This training exercise must be timed with a stopwatch and be administered according to the following procedure. Each child should be given the exercise individually in a quiet room without distracting noises or movements. It is suggested that the teacher should not use the word "test" in describing these "Training Exercises."

Use your own judgment in wording the instructions for these tests, but give the child directions approximately as follows: "Today, you are going to receive a special exercise so that you too can find out how well you are doing." --- (Place exercise sheet in front of child.) --- "Type the three sentences on this page as fast as you can, but concentrate and try to make a perfect copy."

Let the child see your stopwatch and explain that you want to find out how much time is taken in completing the exercise. Give the child a signal to start, and at the end of one minute, record on the "Scoring Sheet" the letter and word being typed, but do not interrupt the student at this point. Allow the child to continue typing all three sentences in the test and record the total time required to complete the exercise. Let the student know the amount of time recorded by the stopwatch.

Present the new material in this lesson once the test is completed. The functions to be introduced in this lesson are: R, S, H, and D. Students should be shown the keying locations of R, S, H, and D, and be given time to copy the "Dexterity Exercises" and "Practice Sentences" found on the exercise sheet on page 28.



TRAINING EXERCISE NO. 1

TEN IN A NET

AT A TONE

NO ONE ATE IT

TRAINING EXERCISE SHEET

Scoring Sheet

Student's Name: _____

Teacher: _____

Date: _____

Location: _____

Training Exercise Test No. _____

1. Location in Cybertyping at end of first minute:

   Letter _____, Word _____

2. Total time for completion _____

Note: Attach student's paper to this form and return to C/R/I

LESSON 3

1. **Dexterity Exercises**

RRR SSS HHH DDD

RS SR SH HS HD DH

RSHD DSRH SRHD HDRS

SRS RHR DHD HSH

2. **Practice Sentences**

NAN RAN

SHE RAN IN THE SAND

SARAH HAS RED SHOES

ETTA SITS

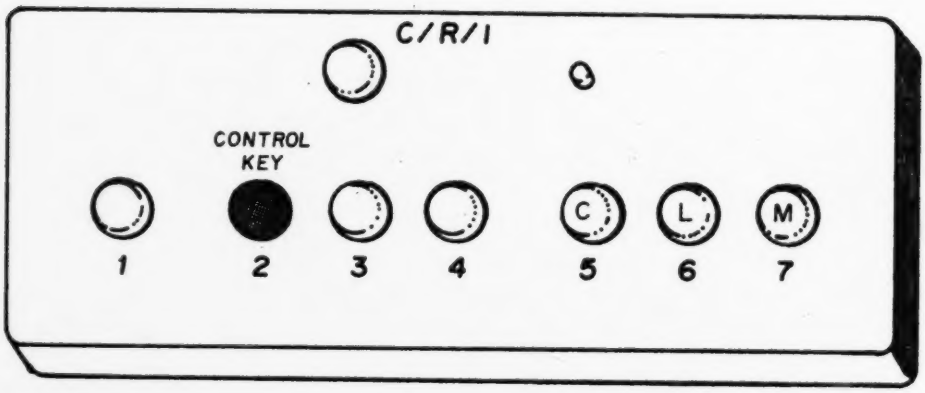
SHE HAD A RED HEN

ANN HAS A HARD HEAD

LESSON 4

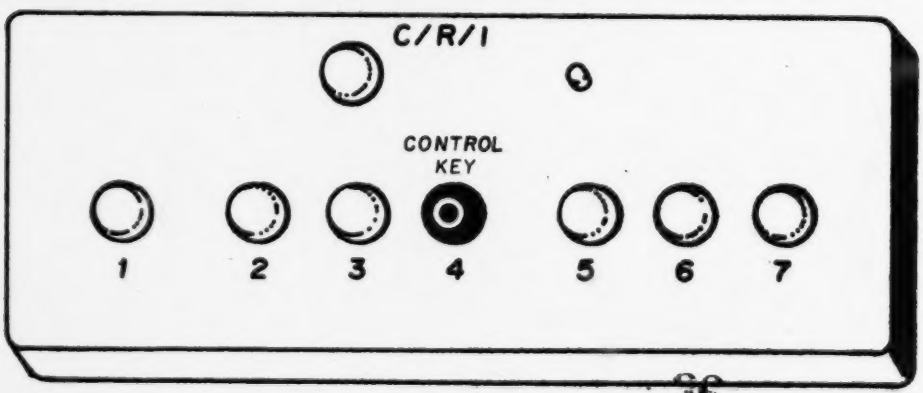
In this lesson, students will be taught the remaining three letters produced by Control Key No. 2, and the period produced by Control Key No. 4. These letters, along with those the students have already learned, will provide a sizeable word vocabulary.

The letters to be introduced are: C, L, and M.



Present the key locations for the new letters in the order indicated above. Then have students complete the "Dexterity Exercises" involving these new functions.

After students have completed these exercises, indicate the use and keying locations for the period. Since the period function requires a different Control Key than the letters R, S, H, D, C, L, and M, it should be introduced separately. Students will then be prepared to proceed with the "Dexterity Exercises" which include periods, as well as the "Practice Sentences."



LESSON 4

1. Dexterity Exercises

CCC LLL CCC MMM LLL

CLC LCL MCM CMC

CL LC CM MC LM ML

CLM MLC LMC MCL

... ...

C. L. M. .C .L .M

2. Practice Sentences

LITTLE OLD HENS SIT STILL.

IT SCARES RON.

SCOT RACES.

CALL AND TELL HER.

TODD RAN A MILE.

TOM AND HE HAD SOME.

ED HELD IT THREE TIMES.

THE LITTLE CAT CAME HOME.

LESSON 5

Lesson 5 is a review of Lessons 3 and 4, involving the letters produced by Control Key No. 2: R, S, H, D, C, L, and M.

Students should copy the words and phrases at the top of the exercise sheet for this lesson. For additional practice, Part 2 of the exercise sheet involves forming new words from the letters in the word "CHRISTMAS." Part 3 requires the student to make new words from sequences of scrambled letters. It may be necessary for you to modify or even delete these "creative exercises" for one or more students, depending on age and ability. Here again, the judgment of the teacher is invaluable.

LESSON 5

1. Copy Words and Phrases

THE	ROSE
CLAD	MITTENS
CHART	SAD LION
MAIL	LAME HORSE
CLAM	CAR DOOR
CENTS	ADD COCOA
CLOSE	STAND AND CHAT

2. How many words can you make using only the letters in the word CHRISTMAS? Type them.

3. Unscramble the letters below to make new words. Type the words you make.

S-T-E-A	(a direction)
H-T-N-R-O	(another direction)
M-R-T-H-O-E	(someone in your family)
S-E-T-N	(a bird's home)
O-O-T	(a word that means also)

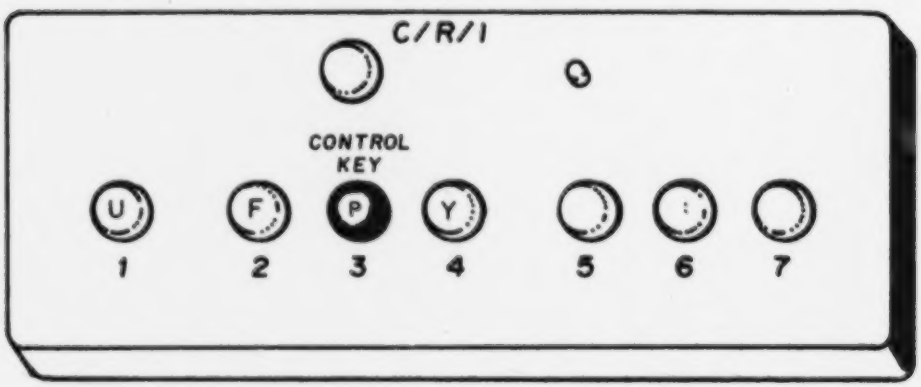
LESSON 6

The second "Training Exercise Test" should be administered at the beginning of this lesson. It is best to precede the test with a brief review of "R, S, H, D, C, L, M, period."

Once the test is completed, present the new material contained in this lesson.

Functions to be introduced in Lesson 6 are: U, F, P, Y.

Students should be introduced to U, F, P, and Y, produced by Control Key No. 3, then be given time to copy the "Dexterity Exercises" and the "Practice Sentences."



TRAINING EXERCISE NO. 2

CATCH MICE.

MOM READS.

LEARN SHORT RIDDLES.

TRAINING EXERCISE SHEET

Scoring Sheet

Student's Name: _____

Teacher: _____

Date: _____

Location: _____

Training Exercise Test No. _____

1. Location in Cybertyping at end of first minute:

   Letter _____, Word _____

2. Total time for completion _____

Note: Attach student's paper to this form and return to C/R/I

LESSON 6

1. Dexterity Exercises

UUU FFF PPP YYY

UF UP UY YU PF

YP FU PY FY PU

UFPU YUPY PFYP FUPF

2. Practice Sentences

RUTH HAS A FUR COAT.

UNTIL THEN SETH FELT FINE.

TURN LEFT UNDER THE TALL TREE.

POLLY MADE A FLOPPY POPPY.

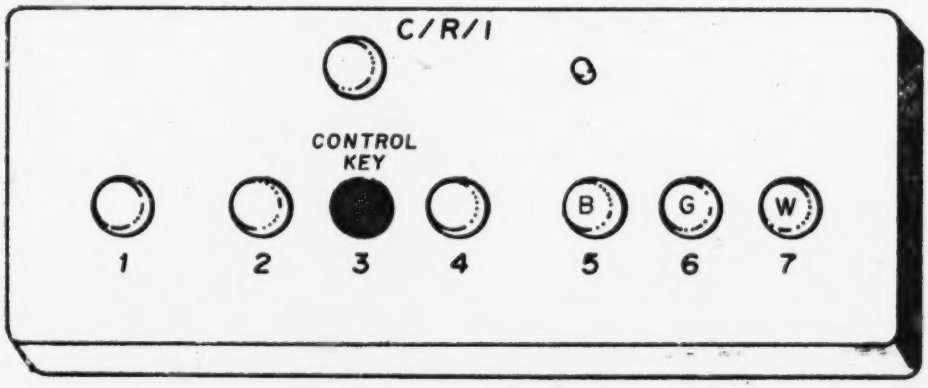
FUN AND FROLIC ARE FREE.

PURPLE PEOPLE ARE HARD TO FIND.

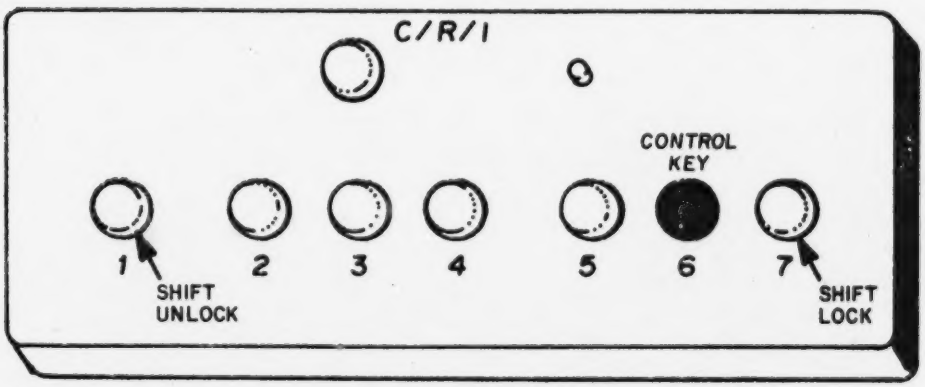
LESSON 7

In this lesson, students will be introduced to the remaining three letters of Control Key No. 3 (B, G, W), and to the "Shift Lock" and "Shift Unlock" functions produced by Control Key No. 6.

Students should first be introduced to the new letters in the order B-G-W, and then be given time to complete the "Dexterity Exercises" involving these new letters.



After the children have completed these exercises, demonstrate the keying positions for "Shift-Lock" (upper-case) and "Shift Unlock" (lower-case), and have students proceed to the second set of "Dexterity Exercises" and the "Practice Sentences."



Thus far, the typewriter has always been placed in the "Shift Lock" (upper-case) position. Starting with this lesson, students will be able to produce upper- and lower-case letters, symbols, and functions by themselves.

Throughout the lesson, emphasize that Control Key No. 3 is used to produce the letters U, F, P, Y, B, G, W, and that the "Shift Lock" and "Shift Unlock" functions require the use of Control Key No. 6.

LESSON 7

1. Dexterity Exercises

bbb ggg www ggg www

bgb gwg wgw bwb gbg

bgwb gbwg wbgw

bg wg gb gw wb

BgW Wbg

Pp Gg Ww Yy

PpP GgG WwW

2. Practice Sentences

The baby played outside in the sun.

Bubbles wiggled through the water.

We flew up to Washington.

See the fat buffalo.

Call his bluff.

Many of the frogs were bigger.

A fat puppy yawned.

LESSON 8

Lesson 8 is a review of the function series for Control Key No. 3: U, F, P, Y, B, G, W (functions presented in Lessons 6 and 7). Again, it is important that the students master this series before proceeding further in the "Cybertype" code.

For practice, students should copy the words and phrases in Part 1 of the exercise sheet for this lesson. If the students perform well, proceed to the other parts of the exercise sheet. Part 3 involves words beginning with "un." Ask your students to make up words using letters you have previously taught them.

LESSON 8

1. Copy Words and Phrases

purple	flag down
four	fluffy cotton
ply	big bug
dry	baby buggy
typewriter	wagging tail
Cybertype	playful puppy

2. Type the names of the days of the week.

3. How many words, using the letters you have already learned, can you think of that begin with un? Type them.

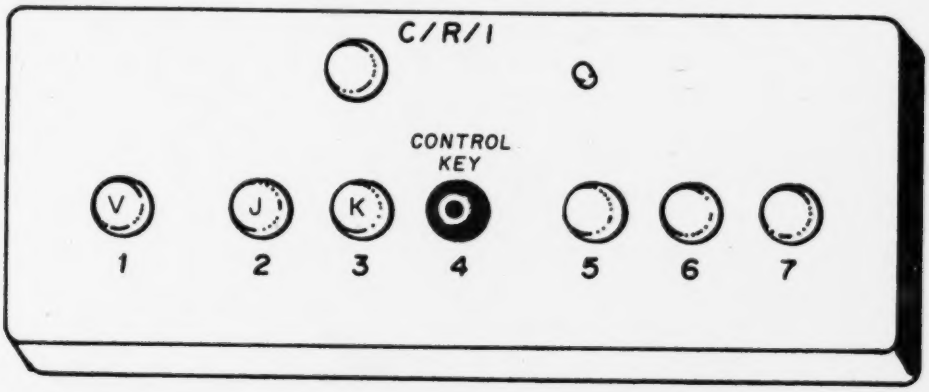
4. Unscramble the letters to make new words. Type the words you make.

n-a-w-y	(a sign that you are sleepy)
g-p-i	(a farm animal)
w-r-g-o	(to get bigger)
w-g-s-a	(what a happy dog's tail does)
f-u-b-f	(to rub to a shine)

LESSON 9

The third "Training Exercise Test" should be administered at the beginning of this lesson. Remember to precede the test with a brief review of "U, F, P, Y, B, G, W."

The functions to be introduced in this lesson are: V, J, and K. These letters are produced with Control Key No. 4 which also produces the period - already introduced in Lesson 4.



Demonstrate keying positions for the new functions in the order V-J-K-period, and give students practice in copying the "Dexterity Exercises" and "Practice Sentences" in Parts 1 and 2 of the exercise sheet.

Part 3 is a creative exercise requiring children to make up words using only the letters in the word "ASTRONAUT." Students usually enjoy the discoveries involved in such Anagram word games, and similar language-building exercises may be developed by teachers and students for use as supplementary instructional materials.

TRAINING EXERCISE NO. 3

Long bumpy beds.

Franny chews gum.

Frog tripped twice.

TRAINING EXERCISE TEST

Scoring Sheet

Student's Name:_____

Teacher:_____

Date:_____

Location:_____

Training Exercise Test No._____

1. Location in Cybertyping at end of first minute:

   Letter_____, Word _____

2. Total time for completion_____

Note: Attach student's paper to this form and return to C/R/I

LESSON 9

1. Dexterity Exercises

vvv jjj ... kkk

... kkk vvv jjj

.vkj jvk. vj.k k.vj

v. j. k. .v .j .k

.v. .j. .k. v.. j.. k..

2. Practice Sentences

Joe gave Jane a Valentine.

Vince visits us every evening.

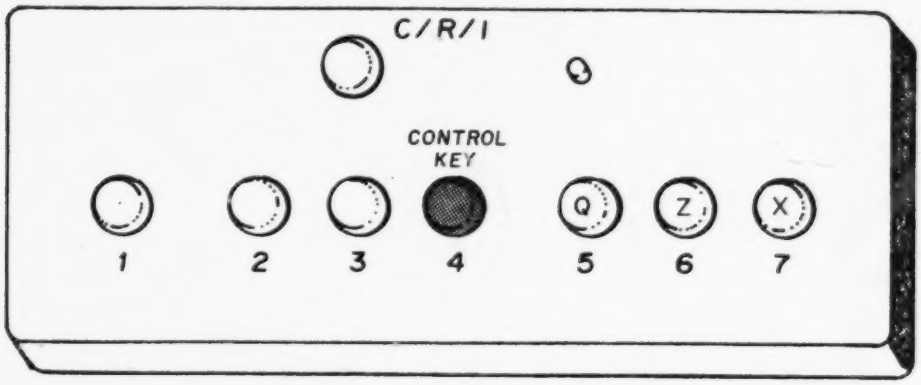
Dr. and Mrs. V.J. Keats were there.

Vera and Jack baked a cake.

3. How many words can you make using only the letters in the word ASTRONAUT? Type these words.

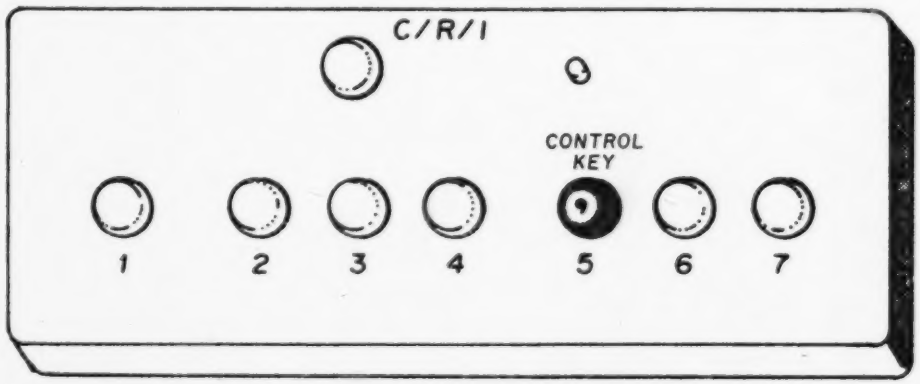
LESSON 10

The functions to be introduced in this lesson are: Q, Z, X, and comma. The letters Q, Z, and X are produced with Control Key No. 4, as shown in the diagram below.



After these letters have been introduced, provide practice using the first part of the "Dexterity Exercises."

The keying positions for the comma should be introduced next. Point out that Control Key No. 5 is used to produce the comma, as shown below.



After key locations for the comma have been demonstrated, have students copy the second part of the "Dexterity Exercises" which includes practice with the comma symbol, then proceed to the "Practice Sentences."

LESSON 10

1. **Dexterity Exercises**

qqq zzz xxx

xxx qqq zzz

qx xq zx xz zq qz

qzx qxz zqx zxq

qxq qzq zqz zxz

,,, ,,, ,,,

,g, ,z, ,x, ,xz

2. **Practice Sentences**

Jim, it is very quiet here.

Quietly jump over the fence.

Max and Kathy danced the waltz.

The fox quietly ran past the zebra, the kangaroo, and the monkey.

Suzie put six zippers in a box.

The fuzzy kitten sneezed.

LESSON 11

Lesson 11 is a review of the functions introduced in Lessons 9 and 10: V-J-K-. (period)-Q-Z-X-, (comma).

Briefly review the keying locations for these functions with the students and have them copy the words and phrases in Part 1 of the exercise sheet. If any students appear uncertain of these functions, provide them with additional practice before proceeding. The students should then complete the exercises in Parts 2, 3, and 4 of the exercise sheet.

Following this lesson, you may want to have the students practice using those exercises from the "Supplementary Materials" Appendix to this Instruction Manual which deal with letters of the alphabet. These exercises will provide a valuable review of Lessons 1-10. Furthermore, the supplementary exercises provide practice with frequently used letter groups and can facilitate "Cybertyping" performance.

Lessons 12-15 introduce the keying locations for numbers and symbols available on the typewriter.

LESSON 11

1. Copy Words and Phrases

buzz	a black kitten
very	a jolly juggler
exit	quit quarreling
walk	a lazy lizard
square	six taxis
zipper	violet velvet
vex	
squeak	
jump	
jam	

2. Type the alphabet. (A, B, C, etc.)

3. Type the names of the months of the year.

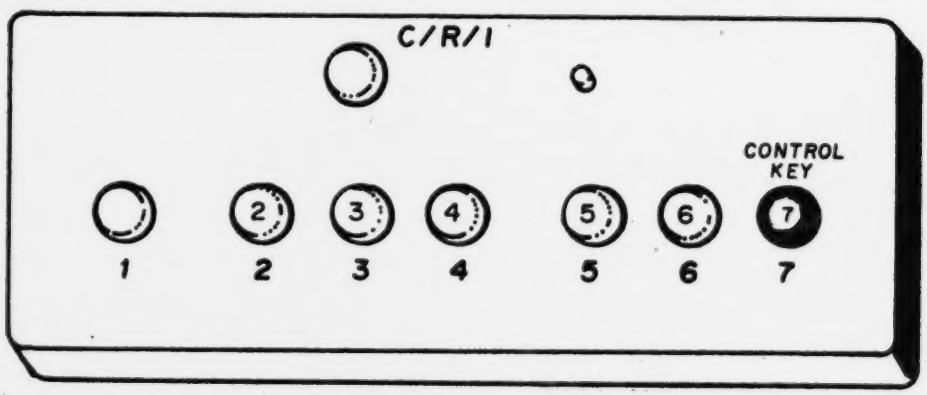
4. Now that you have learned to "Cybertype" all the letters of the alphabet, make up three sentences of your own and type them.

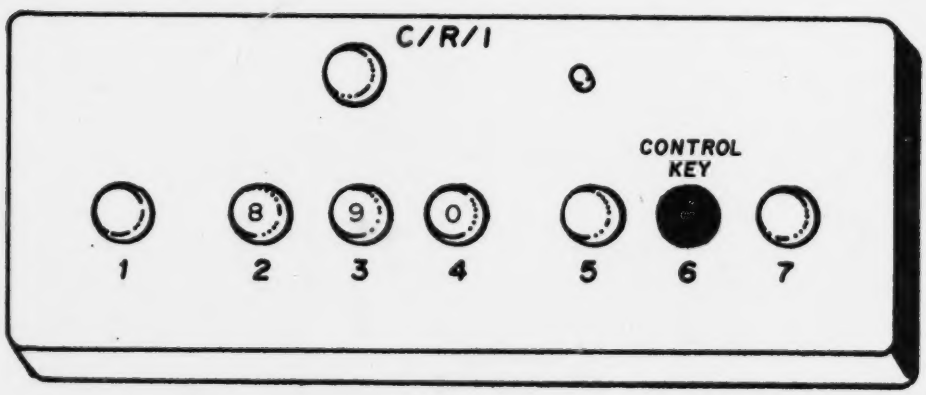
LESSON 12

The fourth "Training Exercise Test" should be administered at the beginning of this lesson. As usual, precede this with a brief review of the functions to be tested. Once the test is completed, introduce the new material in this lesson.

The functions to be introduced in this lesson are the numerals: 2, 3, 4, 5, 6, 7, 8, 9, 0.

The numerals 2 through 7 are obtained with the Control Key No. 7, while 8, 9 and 0 are part of the series for Control Key No. 6.





On some typewriters, it is necessary to use the lower case letter "l" for the numeral "1." Other typewriters will have the numeral "1" (one) as the first function in the Control Key No. 7 series. Be sure to check this on your typewriter and interface before introducing numerals to the students. If your electric typewriter employs the lower case letter "l" for the numeral "1," instruct your students accordingly.

Introduce the keying locations of the numerals to the children, then have them complete the "Dexterity Exercises" and the "Practice Sentences." The numerals are relatively easy to learn because their keying locations are arranged in ordinal sequence. Supply additional practice on the numerals for those students who need it; appropriate exercises may be found in the Supplementary Materials section of the Appendix to this manual.

TRAINING EXERCISE NO. 4

I have a blue jar.

A lazy dog was quiet.

The monkey pinched the fox.

TRAINING EXERCISE TEST

Scoring Sheet

Student's Name: _____

Teacher: _____

Date: _____

Location: _____

Training Exercise Test No. _____

1. Location in Cybertyping at end of first minute:

   Letter _____, Word _____

2. Total time for completion _____

Note: Attach student's paper to this form and return to C/R/I

LESSON 12

1. Dexterity Exercises

1 2 3 4 1 2 3 4

5 6 7 8 9 0

1 2 3 4 5 6 7 8 9 0

10, 9, 8, 7, 6, 5, 4, 3, 2, 1, 0

25 34 16 78 90

57 41 63 829 0

0 1 2 3 4 5 6 7 8 9 10

2. Practice Sentences

Mother needs 2 loaves of bread and 4 quarts of milk.

I will be ready on the count of 3.

There are 7 bananas in this bunch.

A dozen is the same as 12.

John has 56 marbles, and Ken has 98 marbles.

In a countdown, 0 is the last number.

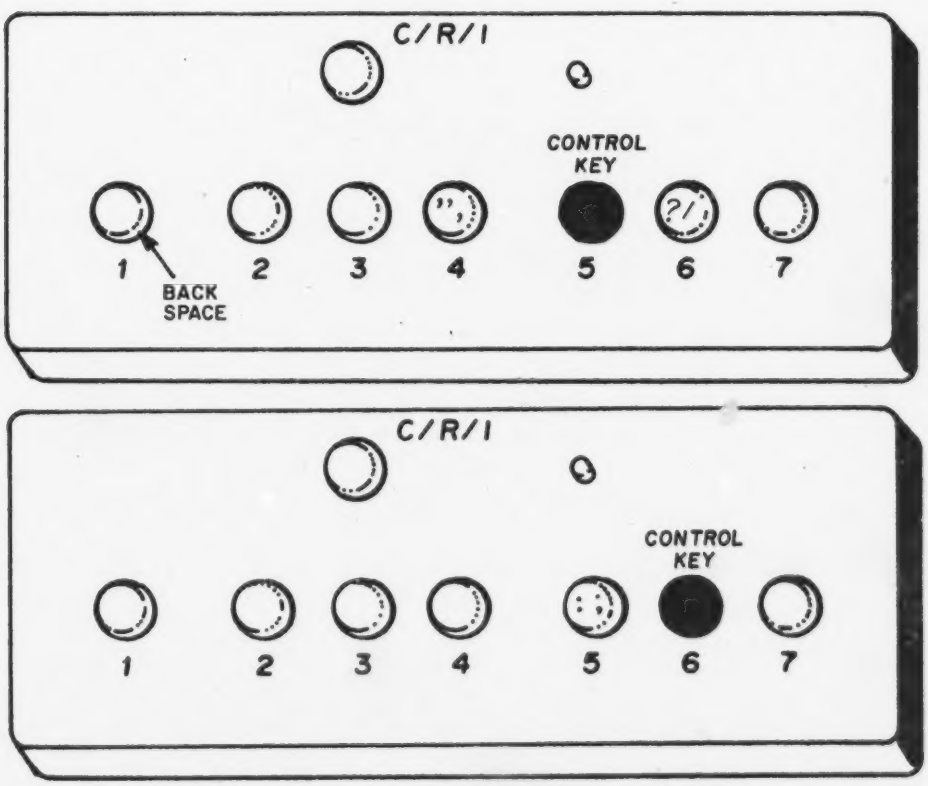
1 2 3 4 5 6 7 8 9 10, ready or not, here I come.

LESSON 13

Briefly review the numerals, then administer the fifth "Training Exercise Test." Present the new materials in this lesson once the test is completed.

Lesson 13 introduces the frequently used punctuation symbols which have not been taught previously. These symbols are obtained with the Control Keys. No. 5 and No. 6.

The functions to be introduced in this lesson are: Backspace, " ' ? / : ;



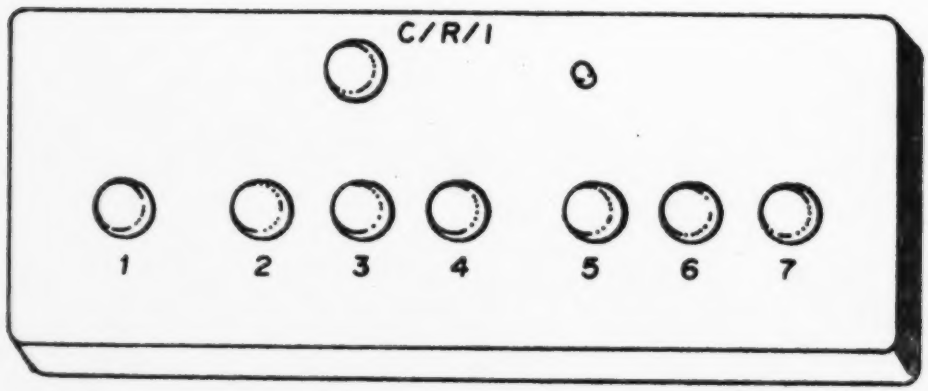
Introduce the sumbols obtained from the fifth and sixth Control Keys in the order given above. It may be necessary to explain the significance of these symbols to some students. Several of these functions are located in upper case as shown in the preceding illustration.

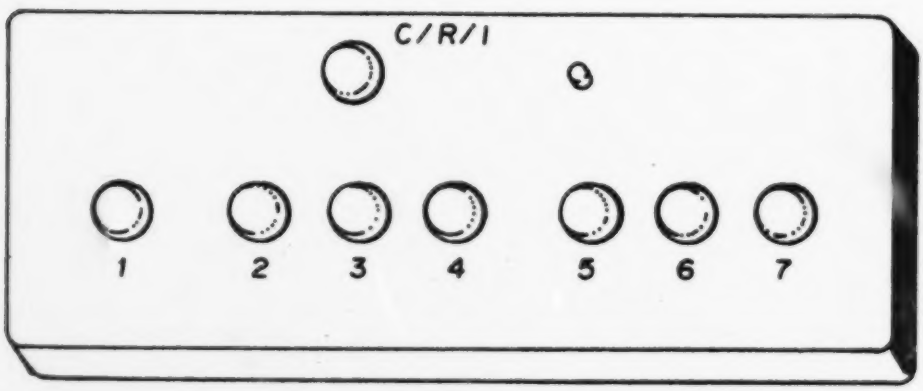
After introduction of the symbols, students should complete Parts 1 and 2 on the exercise sheet. If necessary, provide additional practice using Supplementary Materials in the Appendix.

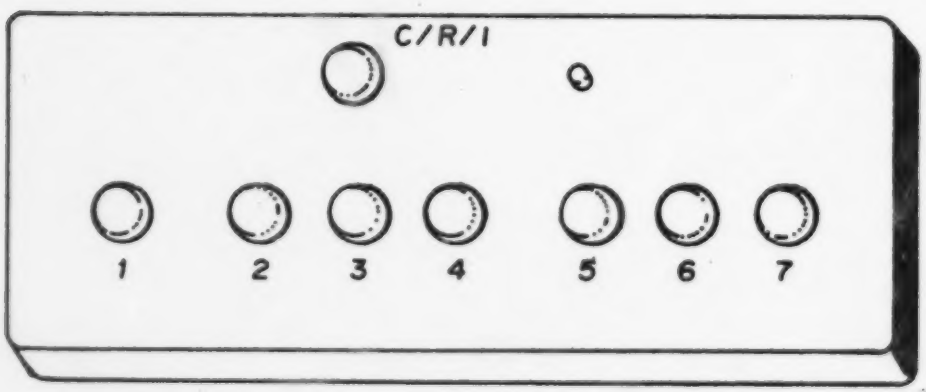
Some punctuation symbols are not introduced in this Instruction Manual because they are used so infrequently. These symbols include: * ( ) @ # $ & %

If an individual student needs to type any of these symbols, the keying locations can be identified by referring to the diagrams in the Introduction to this Manual. Since typewriters vary in the key assignments for certain symbols, dual keying positions can be verified in the following manner: (1) Check the numeral keys on your typewriter to find the symbol desired, remembering that the symbols are upper case functions on typewriters; (2) note the dual keying positions for the numeral corresponding to the desired symbol; (3) place the typewriter in Shift Lock (upper-case) position; and (4) type the desired symbol.

If your keying assignments for certain symbols do not correspond with Figure 3 (page 7), fill in the key positions for these functions using the blank charts on the next page.


C/R/1
1
2
3
4
5
6
7


C/R/1
1
2
3
4
5
6
7


C/R/1
1
2
3
4
5
6
7

TRAINING EXERCISE NO. 5

379 minus 379 equals 0.

4 x 6 is 24.

58 plus 1 is not 8.

62 minus 10 is 52.

TRAINING EXERCISE TEST

Scoring Sheet

Student's Name: _____

Teacher: _____

Date: _____

Location: _____

Training Exercise Test No. _____

1. Location in Cybertyping at end of first minute:

   Letter _____, Word _____

2. Total time for completion _____

Note: Attach student's paper to this form and return to C/R/I

LESSON 13

1. **Dexterity Exercises**

/// / ? ? ? ' ' ' " " " ; ; ; : : :

/ ? / ? ? /

' " ' " " '

; : ; : : ;

(practice the backspace)

/ ? ' " ; :

: ' ? / " ;

2. **Practice Sentences**

I am here; Dad is over there.

Do you want to come along?

Ann is 8 ; Mary is 7.

Buy the following: coffee, cheese, milk, cookies and/or doughnuts.

Is November 12, 1970, also written 11/12/70?

Begin the letter with Dear Sir :.

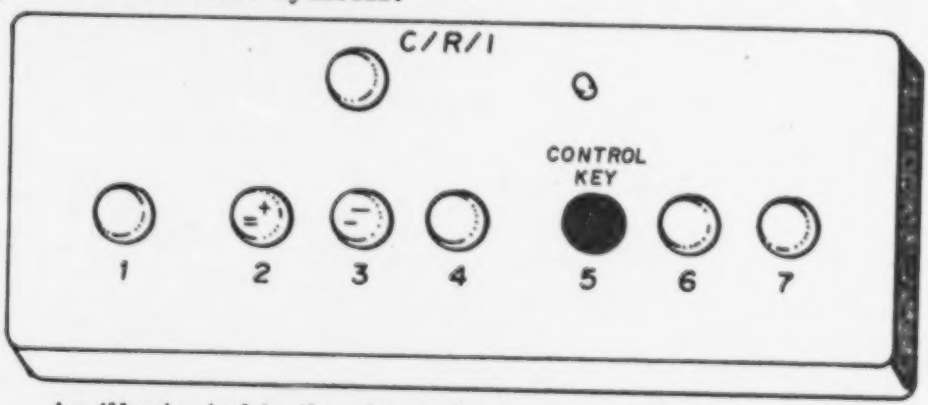
" That's Pam's bike, " said her brother.

LESSON 14

The sixth "Training Exercise Test" should be administered at the beginning of this lesson. Precede this with a brief review of the punctuation symbols. Once the test is completed, present the new material contained in this lesson.

This lesson introduces the math symbols. These are obtained with the Control Key No. 5.

The symbols to be introduced are: = + - (minus) _ (underline). Keying positions for these symbols are shown in the chart below for the IBM "Model C" electric typewriter. IBM "Selectric" typewriters with "Prestige Elite," "Courier," "Letter Gothic," or "Delegate" type styles do not provide the "+" and "=" symbols at all. Check the typewriter assigned to your program to verify positions for these symbols.



As illustrated in the above diagram, + and _ are upper case functions; = and - are lower functions.

For multiplication, the small "x" is used, and a small "d" is suggested for the division sign. The "d" has been chosen to represent "divided by."

Have students complete the "Dexterity Exercises" and the math problem activities on the exercise sheet. Provide additional practice materials for students requiring further assistance.

TRAINING EXERCISE NO. 6

He said, "Is it Al's?"

Oh no; not now!

Dear Sir:

TRAINING EXERCISE TEST

Scoring Sheet

Student's Name: _____

Teacher: _____

Date: _____

Location: _____

Training Exercise Test No. _____

1. **Location in Cybertyping at end of first minute:**

   Letter _____, **Word** _____

2. **Total time for completion** _____

Note: Attach student's paper to this form and return to C/R/I

LESSON 14

1. **Dexterity Exercises**

```
===     +++     ---     ___ (3 underlines)
=+      =+      +=
-_      -_      _-
=_+-
-=+_
_=-+
=+-_    =+-_
x       x       d       d       /       /
```

2. **Math Problems**

1+7=8

6-2=4

5x2=10

9d3=3

14	9	6	24	39	4
+3	-5	x2	+1	-8	x4
17	4	12	25	31	16

4d2=2

LESSON 15

This is the last formal lesson of the Instruction Manual. Begin by administering the seventh, and final, "Training Exercise Test" found on the next page.

The exercise sheet for this lesson consists of suggestions for creative writing. However, for this exercise, children should be encouraged to develop their own ideas in creating stories to be printed using their interfaces.

TRAINING EXERCISE NO. 7

2+2+4=8

7-6=1

5x1=5

9d3=3

TRAINING EXERCISE TEST

Scoring Sheet

Student's Name: _____

Teacher: _____

Date: _____

Location: _____

Training Exercise Test No. _____

1. Location in Cybertyping at end of first minute:

   Letter _____, Word _____

2. Total time for completion _____

Note: Attach student's paper to this form and return to C/R/I

LESSON 15

Suggestions for Creative Writing:

Once there was a little boy who loved (popsicles)...

Once I found...

Once a_____lived deep in the woods...

Once upon a time, long ago, ...

Once there was a family of purple caterpillars ...

C/R/I

INSTRUCTION MANUAL

APPENDIX

Supplementary Materials

SUPPLEMENTARY MATERIALS

TABLE OF CONTENTS

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COPY AND COMPLETION EXERCISES

One, two, and three letter words are used in this particular set of copy materials to provide the student with extensive practice on new letters. Word lists are arranged for each letter group in the "Cybertype" code. Each word list employs letters from its letter group and from those groups previously introduced to the student.

Letter Group: E, T, A, O, N, I

A	TEA
I	TOE
AT	TIE
ON	INN
IN	ATE
IT	ONE
NO	TIN
TEN	NON
NOT	TAN
EAT	NET
TON	TEE
OAT	ION

Letter Group: R, S, H, D, C, L, M

DID	DAD
SHE	END
RAN	SEA
AND	SEE
HIT	AIR
HER	RAT
HIS	RED
SAD	MEN
HOT	HEN
MAT	LET
MID	LIE
CAT	CAN
COT	DOC
HAD	HAS
THE	CAR

Letter Group: U, F, P, Y, B, G, W

bug	pay
mop	ply
bow	pig
pup	bay
rug	fly
pop	run
wee	gum
bop	wig
mug	bum
cup	fun
out	fat
way	pun
pug	got
boy	sun
buy	pat
gay	pry
top	won

Letter Group: V, J, K, Q, Z, X

van	jag
joy	zig
fox	via
eve	zoo
keg	six
jam	jab
vet	ink
box	qua
vim	kit
jig	tax
quo	vat
zip	ave

Sample Fill-In Exercises

The following two pages provide examples of fill-in exercises. Similar work sheets may be constructed at your own discretion.

FILL IN THE BLANKS

Example: I ATE AN ONION

I BOUGHT_____

I BROUGHT_____

I PEELED _____

I COOKED_____

TYPE THE COLOR WORDS;
THEN COMPLETE THE SENTENCES.

RED

BROWN

PURPLE

BLUE

GREEN

YELLOW

BLACK

WHITE

ORANGE

WHAT COLOR IS IT?

1. LETTUCE IS_____
2. BREAD IS_____ OR _____
3. BANANAS ARE_____
4. BEETS ARE_____
5. CARROTS ARE_____

Exercises with Common Letter Groups

This section provides copy exercises with words and sentences employing common two- and three- letter groups.

PRACTICE ON THE "AND" LETTER GROUP

and	brand	Andy
band	grand	dandy
hand	strand	handy
land	handle	sandy
sand	sandal	candy
wand		andante

Hand Andy and Sandy a handle.

A grand band landed on the sand.

I sand and sand and sand a handle.

Andy has dandy sandals.

PRACTICE ON THE "AT" LETTER GROUP

at	sat	ate
bat	vat	date
fat	brat	fate
eat	spat	gate
hat	flat	late
oat	that	mate
mat	boat	slate
pat	float	plate
rat		berate

I eat.

A cat spat at the rat.

A cat sat in a hat on a mat.

I hate late dates.

PRACTICE ON THE "ING" LETTER GROUP

king	sting	mingle
ring	string	single
sing	thing	tingle
wing	wring	cringe
fling	finger	fringe
bring	singer	

Bring the king a ring.
My ring finger tingles.
Sing, sing, single singer.
The king is singing and ringing a bell.
Let's go sliding and sleigh riding,
singing while we're swinging.

PRACTICE ON THE "TH" LETTER GROUP

than	third	three	earth
thank	thirteen	thrill	fourth
that	thirty	throat	growth
thaw	this	throw	health
then	thistle	thumb	math
thief	Thomas	thunder	path
thick	thorn	Thursday	strength
thimble	though	bath	truth
thin	through	birth	with
thing	tough	both	wrath
think	threat	death	youth

This is that thin thing.

I think this thimble is thicker than
that thimble.

A thorn in the path threatened the
growth and health and the strength
of the youth.

PRACTICE ON THE "THE" LETTER GROUP

the	theory	bathe	mother
theater	therapy	bother	other
thee	there	brother	rather
theft	these	either	smother
their	thesis	ether	weather
them	they	father	whether
then	another	heather	wither

The cat sat in the hat on the mat.

They like the hat of the other brother.

The ant ate the oat in the hat.

Exercises with Poems and Jingles

This section provides poems and jingles for children to copy. Many children find such poems fascinating, and these exercises provide additional practice in producing repetitive letters and words.

LIONS LEAPING LIONS

LEAPING LIONS LEAPING

LEAPING IN THE GRASS

LEAPING HERE LEAPING THERE

A MILLION TOMATOES

A MILLION TOMATOES

TOMATOES RED RED RED

I SHALL EAT A RED RED RED
TOMATO

A CAT IS A CAT,

IS A CAT, IS A CAT

AND THAT IS THAT, IS THAT

IS THAT IS THAT,

AND THAT IS A CAT,

IS A CAT, IS A CAT,

AND THAT IS THE END OF THAT,

THAT CAT.

A LOOSE TOOTH

IS A SERIOUS MATTER

IN A MEAN ANIMAL.

HE CAN DREAM

A MILLION DREAMS

AND NOT CATCH

A SMALL SMELL OR

TASTE A TENDER MORSEL.

COPY EXERCISES USING COMMON ABBREVIATIONS

MONDAY	MON.
TUESDAY	TUES.
WEDNESDAY	WED.
THURSDAY	THURS.
FRIDAY	FRI.
SATURDAY	SAT.
SUNDAY	SUN.
MARYLAND	MD.
VIRGINIA	VA.
DISTRICT OF COLUMBIA	D.C.
PENNSYLVANIA	PA.
JANUARY	JAN.
FEBRUARY	FEB.
MARCH	MAR.
APRIL	APR.
AUGUST	AUG.
SEPTEMBER	SEPT.
OCTOBER	OCT.
NOVEMBER	NOV.
DECEMBER	DEC.

"CYBERTYPE" WORD LIST

This section provides lists of commonly used words arranged for each letter group in the "Cybertype" code. The order of presentation for letters within each letter group is consistent with the presentation order for letters in the Instruction Manual for 14-key, "Cybertype" dual-input systems. These word lists can readily be used with the 7-key "Cybertype" system, although the presentation order for letters within each letter group differs slightly from that given in this section.

Word lists for each letter are based on other letters in the same group, or on letters in groups previously introduced. After teaching a complete letter group (e.g., "R, S, C, H, L, D, M"), the word lists for each letter in that series may be used as a source for further practice.

This section is also intended for use in the composition of sentences, and should be particularly helpful in practice and reinforcement of the letter-keying code in the early stages of instruction with the "Cybertype" system.

Letter Group: E, O, T, N, A, I

a
I
at
ate
to
too
eat
tea
toe
toot
an
neat
no
ant
none
noon
not
on
note
teen
in
nit
tie
ten
one
nine
in
it
ion
iota
tint
tent
ton
tan
tin
nation
attention

Letter Group: R, S, C, H, L, D, M

R	S		C	
air	also	stairs	accident	dance
are	as	star	ace	doctor
ear	easiest	start	ache	each
enter	east	station	across	ice
entire	Easter	stone	act	nice
eraser	interest	store	can	ocean
iron	is	street	cane	once
near	its	taste	cannot	race
nor	nearest	tease	car	reach
or	nest	test	carrot	rice
rain	noise	toast	card	rich
ran	nose		care	
rat	reason		case	
roar	rest		cash	
root	rinse		cat	
rotten	roast		catch	
tear	rooster		cent	
tire	rose		center	
tore	sat		chain	
torn	seat		chair	
train	season		chance	
tree	sea		chase	
	see		cheat	
	seen		chin	
	sent		choice	
	set		choose	
	sir		chosen	
	siren		coal	
	sister		coat	
	sit		cocoa	
	snore		cone	
	so		corn	
	soon		corner	
	sore		cost	
	stain		cross	

H

another
earth
either
hair
has
hat
hate
he
hear
heart
heat
hen
her
here
hi
his
hit
horn
horse
hose
hot
neither
north
oh
other
rather
share
she
sheet
shine
shoe
shoot
short
than
that
the
their
then
there
these
this
thin
these
three
threat
tooth

L

all
alone
call
calm
careless
child
children
chocolate
circle
class
clean
clear
close
cloth
clothes
cold
color
cool
cradle
doll
dollar
electric
else
hall
hell
hello
hill
hold
hole
lace
laid
land
last
late
later
lead
learn
leather
led
lesson
let
letter
lie
line
lion
listen
little
load
loose
lose
lost
lot
nails
old
real
roll
sail
salt
school
sell
shall
shell
sold
soldier
steal
still
tail
tall
tell
till
told

D

ad
add
address
and
dad
dare
date
dead
dear
deer
dentist
did
die
dinner
dirt
dish
distant
do
does
done
door
dot
dress
dried
end
had
hand
hard
head
heard
hid
hide
idea
indoors
inside
instead
need
nod
order
radio
read
red
ride
read
rode
road
sad
said
sand
seed
send
side
stand
stood
third
tired
trade
tried

M

am
almost
animal
arm
came
chimney
Christmas
climb
come
cream
dime
dream
ham
hammer
him
home
ice cream
lemonade
made
mail
mailman
mama
man
march
matter
me
mean
meat
medicine
meet
melt
men
mend
met
middle
mile
mill
million
mind
mine
mint
mirror
miss
mom
moment
month
moon
more
most
mother
Mr.
Mrs.
name
room
same
seem
slam
small
smell
smile
some
sometime
stomach
storm
team
them
time
tomatoes

Letter Group: U, F, B, P, G, Y, W

U	F	B
about	afraid	automobile
aloud	after	babies
around	afternoon	baby
aunt	calf	bad
cause	careful	ball
church	chief	balloon
circus	different	banana
cloud	face	band
clue	fair	barn
count	fall	bat
course	fan	bath
cousin	far	bathe
cruel	farm	be
cure	farmer	beans
curtain	fast	bear
cushion	fat	beat
cut	father	beautiful
cute	fear	because
discuss	feather	bed
dust	feed	bee
hour	fell	been
house	felt	beer
hundred	fence	before
hunt	field	behind
hurt	fill	bell
lettuce	find	bend
loud	fine	beside
lunch	finish	best
measure	fire	better
minute	first	bicycle
mountain	fish	bill
mouse	fit	bird
mouth	flies	birthday
much	float	bit
muscle	floor	bite

U

music
muss
must
number
nurse
nut
our
out
outdoors
outside
round
ruin
run
rush
should
shoulder
shut
sound
south
such
suit
summer
sun
sure
thousand
touch
true
turn
turtle
uncle
under
until
us
use

F

food
foot
for
forth
found
four
free
fresh
fried
friend
from
front
fruit
full
fur
furniture
half
herself
himself
if
leaf
left
life
lift
of
off
office
often
roof
self
soft

B

bleed
bless
blood
blue
board
beat
body
bone
born
both
bottom
boy
branch
bread
broom
brother
brush
build
built
bumblebee
bump
burn
burnt
burp
bus
busy
but
butcher
butter
butterfly
button
buy
by
double
habit
lamb
rabbit
remember
ribbon
rob
robin
rub
rubber
table
thumb
tub
umbrella

P

airplane
apple
camp
cap
captain
cup
cupboard
deep
dope
drop
elephant
help
hop
hope
lamp
lap
leap
lip
nap
open
pail
pain
pair
pal
pan
pants
papa
paper
parade
parents
part
pass
past
paste
pat
path
peach
peas
peel
piano
picnic
picture
pie
piece
pin
pipe
place
plain
plant
plate
please
point
pond
policeman
poor
pop(corn)
porch
post
pot
potatoes
pound
press
pull
put
shape
sheep
ship
shop
sleep
slip
soap
space
spoon
spot
spread
step
stop
supper

G

again
against
age
ago
along
angel
angry
anything
bag
bandage
began
begin
begun
belong
big
bought
bright
bring
brought
building
bug
change
cough
danger
dig
dining
dog
drug
edge
egg
eight
engine
enough
fight
finger
flag
forget
forgot
frog
gate
get
ghost
gift
giraffe
girl
glad
glass
go
goat
goes
going
gold
golden
gone
good
goodbye
gorilla
got
grade
grain
grandfather
grandmother
grape
grass
gray
great
green
grocery
ground
guess
guest
gum
hang
high
hung
hungry
large
laugh
neighbor
night
nothing
orange
page
pig
rag
right
ring
rug
sign
something
song
spring
sting
straight
string
strong
sugar
though
thought
through
together
tongue
tough
ugly

P		G	
pen	suppose	gallon	leg
pencil	surprise	game	light
people	top	garage	long
pet		garden	might
		gas	morning

Y

already
any
candy
city
company
copy
country
crayons
cry
day
dirty
dry
early
easy
empty
eye
family
fly
funny
happy
hurry
lady
lay
many
may
money
my
myself
only
party
pay
penny
play
pony
pretty
puppy
ready
say
silly
today
toys
try
way
yard
year
yes
yesterday
yet
yell
you
sorry
stay
story
they
thirsty

W

allow
always
answer
away
awful
between
blow
bow
bowl
brown
clown
cow
crowd
crown
down
draw
drawer
fellow
few
flower
follow
grew
grow
how
low
new
now
own
pillow
row
sandwich
saw
sew
shadow
show
slow
snow
sweat
sweater
towel
town
twelve
twenty
two
wagon
wait
wall
want
war
warm
was
wash
waste
watch
water
we
wear
weather
wedding
well
went
were
west
wet
what
wheat
wheel
when
where
whether
which
while
whisper
white
who
whole
whom
whose
will
win
wind
window
wing
winter
wish
witch
with
without
woman
women
wonder
wood
wool
word
wore
world
worry
would
wrap
write
wrong
yellow
sweep
sweet
throw
tomorrow
why
wide
wig
wild

Letter Group: V, J, Q, K, Z, X

V		J	Q
above	valley	jail	quack
alive	vanilla	jam	quarrel
believe	velvet	jar	quarter
brave	very	jelly	queen
cover	vine	job	question
dive	voice	join	quick
drove	wave	joy	quiet
eleven	weave	jump	quite
evening		just	square
ever		pajamas	squash
every			squeak
everything			squirrel
five			squirt
gave			
give			
glove			
have			
heavy			
leave			
leaves			
live			
love			
move			
never			
over			
overalls			
prove			
river			
save			
serve			
seven			
several			
shave			
shiver			
stove			
twelve			

K

ask
awake
awoke
back
bank
bark
basket
beak
bike
black
blackboard
book
break
breakfast
brick
broke
cake
check
cheek
chicken
clock
cook
cookie
crackers
creek
dark
drink
duck
fake
fork
handkerchief
joke
keep
kept
key
kick
kill
kind
king
kiss
kitchen
kitten
knee
knew
knife
knock
know
lake
like
lock
look
make
mark
market
milk
monkey
napkin
neck
nickle
park
peck
pick
pickle
pocket
rock
sack
shake
shook
sick
silk
skates
skin
skirt
sky
smoke
snake
socks
speak
spike
spoke
steak
stick
stocking
strike
suck
take
talk
thank
Thanksgiving
thick
ticket
took
truck
wake
walk
week
work

Z

breeze
buzz
crazy
dozen
freeze
frozen
fuzzy
jazz
lazy
prize
puzzle
quiz
raze
size
sneeze
waltz
zebra
zero
zipper
zoo
zoom

X

axe
box
except
excited
expect
exit
fix
fox
mix
next
six
taxi

"CYBERTYPE" PRACTICE SENTENCES

The following sentences are designed to emphasize and reinforce the learning of newly introduced letters. For each letter (with the exception of E, O, T, N, A, I), there are at least four sentences, each sentence using the pertinent letter a minimum of three times, and using with it only those letters from the same "Cybertype" letter group previously introduced.

To further supplement your activities, you may want to compose similar sentences by referring to the "'Cybertype' Word List" in the preceding section.

Note: Where possible, emphasis should be placed on the development of student creativity by encouraging students to compose their own sentences with their "Cybertype" systems, using the sentences in this section as models.

PRACTICE SENTENCES FOR THE E-O-T-N-A-I "CYBERCODE" SERIES

(Use after entire series has been introduced)

E, O, T, N, A, I

I ate at ten.

I eat one onion.

An ant ate an oat.

At noon I eat in a tent.

A neat teen ate a tan onion in a tin.

I note a nation at attention.

PRACTICE SENTENCES FOR THE R-S-C-H-L-D-M "CYBERCODE" SERIES

(Use after the entire series has been introduced)

R

A rear tire tore.

A rat ran under a tree.

Aaron ran near a train.

An iron train ran into a rotten tree root.

I enter an eerie terrain.

S

Teens sit on seats.

Toss Rose a stone.

Roast toast is in season.

Sara Stasson stores onions in a stone seat.

A senior senator starts a sensation.

C

He can catch a cat.

A car can coast.

Cocoa costs ten cents.

Cora can dance the cancan.

A cat can catch a roach.

Richard Rice cheats at cards.

H

She has his hose.

He has thin hair.

He has three shoes.

The hen hit the horse on the shoe.
(Emphasizing THE)

He harnesses his horse at the station.

L

Tell Ellen to call.

A late lad eats less.

Let a child lead the line.

Little Nellie lost her doll.

Tell Tillie a tall tale.

Elsa is a real cool doll.

D

Dad had a red radio.

Hand Dot a dish.

A sad dad had a hot head.

Dad and Ed stand in the sand.
(Emphasizing AND)

The distant dentist does not season his roast hen.

M

Mom made me a mitten.

I smell some meat.

Tell him to come home.

Tom marched almost ten miles.

Mrs. Moon made creamed meat.

A calm clam came late.
(Emphasizing C, L, M)

PRACTICE SENTENCES FOR THE U-F-B-P-G-Y-W "CYBERCODE" SERIES

(Use after the entire series has been introduced)

U

Stu could use us.

The nurse rushed us out.

Cut a rut under our cute house.

Uncle Curt runs around our church each hour.

Let us discuss musical matters.

F

A fat father fans his face.

Find a foot of felt.

Flat feet often fall.

Find Fran a full loaf.

I fear a fish fell off the roof.

B

Boy babies bite better.

Bill built a blue boat.

Baby Bess bit her rubber rabbit.

Bob rubbed his bruised bottom.

Beer and beans made Mable burp.

P

Pat planted peas in a pot.

Please pass Paul a pail of paint.

Peter sleeps up on top of a piano.

Pam helped Pat peel potatoes.

Pop slipped and dropped his piece of apple pie.

G

Go get a big bag.

A big ugly pig got angry.

Eggs get bigger in spring.

Gail Higger gets green grape gum.

Angry angels fight grog and eggnog.

Y

Sally yells all day.

Fay can only pay a penny.

Dirty dry crayons made Mary cry.

If you do not pay today you may be sorry.

My city already has a candy company.

W

How now brown cow.

Wild winter winds blow.

We will wash with water.

Willie wants to win a new watch.

Wanda wore a yellow wool wig.

PRACTICE SENTENCES FOR THE V-J-Q-K-Z-X "CYBERCODE" SERIES

(Use after entire series has been introduced)

V

I shave every evening.

Brave beavers love to dive.

Give Victor five heavy gloves.

Eve and Harv have every vote.

I have never lived over a valley.

J

Jane just jumped.

Jolly Jimmy enjoys jam and jelly.

John juggles juicy objects.

Major Johnson joined a banjo band.

Q

Quit quarreling and be quiet.

The quiet queen requires a quilt.

Form a square quickly and quietly.

A squirrel squeaked and squirted squash.

K

Jack took his bike back.

Kate kissed her black kitten.

I like to bake cakes and cookies.

Dick picked a peck of pickles.

Z

Bees buzz and zoom lazily.

I need a dozen large size zippers.

The zebra waltzed with the fuzzy bear.

In winter Suzie wheezes and sneezes and freezes.

X

Fix a box for the fox.

Rex will be six next week.

I see six taxis at the next exit.

An anxious axman expects a maximum of sixteen.

TOPICS FOR CREATIVE WRITING

(Note: Suggest these topics only after all letters, symbols, and functions in the "Cybercode" have been introduced).

Once there was a little boy who loved (popsicles) . . .

One day when Bobby got home from school he found an enormous _____ on the doorstep . . .

Once upon a time there was a family of purple caterpillars . . .

Once I found . . .

Once a _____ lived deep in the woods . . .

Once in a far away land . . .

Once upon a time long, long ago . . .

Deep in the jungle, on the top of a great big tree . . .

PERSONAL TOPICS FOR ORIGINAL WRITING

My friends . . .

My family . . .

My favorite things . . .

My favorite foods . . .

Me . . .

WRITE A STORY.

WRITE A STORY.

Imagine . . .

a green froggy all soggy

a sleepy sloth waked by a moth

a turtle gruff in a huff

playing in the hay today

having peanut butter on your shutter

a hug from a bug

Use your imagination to "Cybertype" a story about one of the above topics.

Imagine that the following things have happened to you. Tell what you did.

What happened when you clucked at a duck?

What happened when you bonged on a gong?

What happened when you slipped on a ship?

What happened when you got muddy with a buddy?

What would we see if . . .

we visited the zoo?

we went to a farm?

we went to a supermarket?

we went to a theater?

we toured an art museum?

we went to school?

we went to the beach?

we visited your house?

What would happen if . . .

everyone in the classroom talked at once?

the clock in your house didn't work?

you left a dog and some hamburger alone in the same room?

someone brought a little snowman into the room and set it on his desk?

everything fell <u>up</u> instead of down?

the bell at the end of your recess period didn't ring?

the sun continued to shine all night long?

CREATIVE ANSWERS

Think of and list 5 things you could do with . . .

a paper napkin

clothespins

a long piece of wire

a catalog

a wash cloth

a big box

a tiny box

toothpicks

a magazine

an old plastic tablecloth

a twig

a hook

a piece of rope

a paper clip

empty orange juice cans

marshmallows

CREATIVE ANSWERS

List all the things you can wear on your hands.

List all the things you can wear on your feet.

List all the things you can think of that are red.

List all the things you can think of that are hot.

List all the things you can think of that are shaped like a triangle.

List all the things you could do with your nose.

LANGUAGE BUILDING EXERCISES

(Note: These exercises should be used only after children have learned the entire letter-keying code).

SYNONYMS

Synonyms are words that have the same meaning.

Type these sentences using a synonym for the underlined word.

Example: That woman is my mother.
Answer: That lady is my mother.

1. I gave the letter to the postman.
2. My dad went to work.
3. Joe cannot find his galoshes.
4. The lad is ten years old.
5. The sunset was pretty.
6. The puppy ran across the street.
7. The bird flew toward the nest.

ANTONYMS

Antonyms are words that have opposite meanings.

Here is a list of paired words. Some are opposites (antonyms) and some are not. Choose the antonym word groups and type them.

Example: work, play
Answer: work, play

Example: tiny, wee
Answer: (do not type anything)

1. hot, cold
2. fish, feet
3. big, little
4. fast, slow
5. fun, games
6. angry, happy
7. cry, weep
8. white, black
9. dry, wet
10. all, none

HOMONYMS

Homonyms are words that sound alike.

Type the words that sound alike in each set.

Example: bore, born, boar
Answer: bore, boar

1. fur, for, four
2. your, our, hour
3. to, toe, two
4. mane, main, mean
5. soar, sour, sore
6. so, sew, sue
7. sun, sin, son
8. at, ate, eight
9. see, so,sea
10. scene, son, seen

How many words can you type using only the letters in the word DICTIONARY?

Type them. (You may use the same letter more than once.)

How many words can you type using only the letters in the name CHARLIE BROWN?

Type them. (You may use the same letter more than once.)

Which month is it?
(Type your answer.)

January

February

March

April

May

June

July

August

September

October

November

December

How many words can you type using only the letters in the name of this month? Type them.

COMPLETE THE RHYMES

ON THIS PAGE

Worms wiggle.
Girls _____.

Sheep sleep.
Lions _____.

I climb a tree
To see the _____.

He will float
Beside the _____.

I sat on a ledge
To cut the _____.

He sat still
As he rode down the ___.

I have a rock
In my _____.

I like jam
With my _____.

See the locks
On the _____.

It has a crack
In _____.

Quick kittens
With muddy _____.

It was a joy
To see the _____.

WORD BUILDING EXERCISES

Form words by using the following letters to fill in the blanks.

t n r s h d c l m

_in	_at	_ate
_in	_at	_ate
_ain	_an	_oat
_ain	_an	_oat
_ot	_eat	_ean
_ot	_eat	_ean
_one	_am	_eam
_one	_am	_eam

COMPLETION EXERCISES

Complete the last word in each line, and type the sentences.

1. Mother has a pretty r_____.
2. Bob plays with his d_____.
3. Susan can read a b_____.
4. Tom works with a s_____.
5. Jack wants a b_____.
6. Larry rides in a c_____.
7. Tom can fly his k_____.

"B" WORDS

Arrange and type these words in alphabetical order.

bike

bird

barn

ball

bat

bear

book

bed

Copy these sentences; fill in the missing words from the list above.

1. **You sleep in a _____.**
2. **Cows live in a _____.**
3. **You read a _____.**
4. **You may find a _____ in the zoo.**
5. **You hit a ball with a _____.**
6. **The boy rides his _____.**
7. **A _____ can fly.**

"K" WORDS

Think of a word that begins with "K", and type your answer.

1. It is a girl's name. _____
2. It can fly high on a windy day. _____
3. It is soft and small. _____
4. It can jump very far. _____
5. You can unlock a door with it. _____

"L" WORDS

Type only the names of things that grow, choose them from this list.

leaf

letter

laugh

lamp

lock

lamb

light

lion

leg

What goes with this word?

shoes

bread

mother

sister

hot

sun

fork

bacon

cat

cake

work

NUMBERS AND MATH SYMBOLS

(Note: These exercises are to be used only after students have learned the entire letter-keying "Cybercode.")

1. Number Practice

1	2	3	4	5	6	7	8	9	10
10		20		30		40		50	
60		70		80		80		100	
91		28		73		46		50	
1950		1960		1970					

2. Number Sentences

1 and 1 are _____

2 plus 3 is _____

4 minus 2 is _____

Today is _____
month day year

Count to ten:

— — — — — — — — — —

ADDITION:

1 + 1 = ___

2 + 2 = ___

3 + 3 = ___

4 + 4 = ___

5 + 5 = ___

6 + 6 = ___

7 + 7 = ___

8 + 8 = ___

9 + 9 = ___

10 + 10 = ___

1 + 2 = ___

3 + 4 = ___

5 + 6 = ___

7 + 8 = ___

9 + 10 = ___

SUBTRACTION:

6 - 5 = ____

8 - 3 = ____

7 - 3 = ____

9 - 2 = ____

7 - 5 = ____

3 - 3 = ____

9 - 8 = ____

24 - 24 = ____

24 - 20 = ____

24 - 4 = ____

268 - 268 = ____

268 - 0 = ____

3895 - 1 = ____

MULTIPLICATION:

3 x 4 = ____

6 x 4 = ____

7 x 3 = ____

4 x 5 = ____

2 x 8 = ____

3 x 8 = ____

5 x 1 = ____

5 x 7 = ____

6 x 6 = ____

7 x 4 = ____

9 x 5 = ____

2 x 3 = ____

DIVISION:

10 d 5 = ____

8 d 4 = ____

9 d 3 = ____

12 d 3 = ____

21 d 7 = ____

15 d 3 = ____

32 d 4 = ____

4 d 1 = ____

20 d 5 = ____

MATH PRACTICE:

2 + 4 = ____	32 - 2 = ____
3 + 7 = ____	49 - 9 = ____
10 + 5 = ____	26 - 6 = ____
4 x 2 = ____	6 d 3 = ____
6 x 3 = ____	10 d 2 = ____
29 x 1 = ____	16 d 4 = ____

25	400	444	869
+33	+200	-222	-634

8	4	3
x3	x7	x1

Place the Correct Math Symbol in the Circle:

2 ◯ 2 = 4

10 ◯ 9 = 1

3 ◯ 4 = 12

7 ◯ 5 = 2

5 ◯ 6 = 11

15 ◯ 5 = 3

6 ◯ 1 = 7

8 ◯ 4 = 2

10 ◯ 1 = 11

24 ◯ 24 = 0

14 + 0 ◯ 14

9 + 2 ◯ 11

LETTERS, PUNCTUATIONS, AND NUMERALS

INTEGRATION EXERCISES

The copy exercises on the following pages employ all the functions taught in the "Cybertype" code. Each function is used at least twice, while the more common functions are used repeatedly.

eotnai rschldm ufbpgyw vjqkz.x

(Sp)ruv esfj ocbq thpk

nlgz ady. imwx

1234 4321 567 765 890 098

0 1 2 3 4 5 6 7 8 9 10

5 24 361 7000 89

/ ? ' " ; : ! ? ! " ; / : '

= + - _ x d _ + - =

Isn't Joe's dog lost?

Aunt Mary said, "Happy Birthday!"

Twenty-three men, women, and children came to the party.

342 - 342 = 0

Men landed on the moon on 7/19/69.

The electric lamp was invented January 27, 1880, by
Thomas A. Edison.

10 + 2 = 12; 11 + 1 = 12

The quick king waltzes very exuberantly.

Dear Sir:

Shopping List:

2 loaves of bread

3 boxes of cereal

4 quarts of milk

5 bananas

6 eggs

7 slices of ham

8 oranges

I have chocolate, vanilla, and strawberry;

which do you want?

Do you want nuts too?

Yes, please.

Thank you, Mrs. Sands.

This is another way to write a date. It is shorter and uses only numerals.

Using January 26, 1972 as an example, follow Steps 1 through 5 to write it the short way on your "Cybertype."

Step 1: **January is the first month; call it "1."**

Step 2: **Make a slash.**

Step 3: **Put the numeral date of the month (26).**

Step 4: **Make another slash.**

Step 5: **Then type the last 2 digits of the year (72).**

Answer: 1/26/72

How would you write February 14, 1965, the short way?

Type today's date the short way.

Type your birthday this way, too.

I am thirsty.

May I have a glass of water?

Thank you, Mother.

What did Debbie have in her purse?

She had 2 combs, a mirror, 7 bobbi pins,
6 tissues, and 45 cents.

I can't do that.

Don't touch the hot pot.

"I'm ready," said John.

"Ouch!" yelled Sally.

= - ' , / + _ " , ? ! ! !

Will you please open the door?

"I'm ready."

Thank you, Dad.

Hi, Cathy!

Nov. 23, 1970: 11/23/70

My brother is twenty-one!

"Hello, John!" called Randy.

"How about playing ball?"

John said, "I'd like to, but I can't right now."

"Which is blue? Joe's book, Mary's pencil, Judy's paper, or Bob's ruler?" asked Miss Mann.

"Bob's ruler!" answered Sue.

"My book is green," said Joe.

Dear Sir:

This is not the doll that I ordered. Please send the one that has red hair.

Thank you.

Sincerely,

Dear Sir:

This is not the car that I ordered. Please send the red one that costs ninety cents.

Thank you.

Sincerely,

B-89

FREQUENTLY USED TWO AND THREE LETTER SEQUENCES AND WORD EXERCISES

(These exercises should be used only after the entire "Cybercode" has been introduced)

The following word lists and practice exercises were developed for use in learning some of the basic phonetic components of words. They include such constructions as frequently used two and three letter sequences, prefixes and suffixes.

Practice with these exercises will not only increase the student's knowledge of and alertness to common phonetic components of the English language, but will also increase his proficiency on the "Cybertype." The letter groups mentioned herein occur frequently in written language. Practice in typing them can increase accuracy in typed communications by developing skill in the production of commonly occurring letter sequences.

In addition to providing the instructor with extensive word lists employing the above, this section also includes examples of exercises in which the student can use these letter groups to construct words, produce rhyming words, and compose short sentences. To supplement the above, you may choose to construct exercises similar to those included within this section.

WORD LIST

Based on Commonly Used Two-Letter Sequences

an	ar	as	at	bl
band	bar	ask	battle	black
can	card	task	cat	blur
dandy	ear	gas	eat	blimp
fan	jar	has	fat	blot
man	mar	was	hat	blast
panda	oar	mass	mat	blink
ran	par	last	Patty	bleed
sandal	tart	sassy	rats	blue
tanning	ware	grass	sat	blood
van	hard	waste	sat	bleek
wander			vat	block
angry			that	
angle			what	
ant			ate	

br	ch	cl	cr	de
brown	chair	clear	creep	hidden
brush	chap	cloud	crawl	tide
broil	chain	clown	cradle	dead
brew	choke	clap	crash	decide
breed	chop	clip	crept	deal
brine	chill	clock	cream	depart
brisk	chum	close	creek	made
bracket	chow	clans	cringe	idea
brace	chore	class	crab	deck
	cheer	claw	crab	deck
	cheap	clean		deep
				side

dr	dw	ea	ed	en
draw	dwell	each	fed	dent
dry	dwindle	eager	led	hen
drip	dwarf	peach	Ted	mend
drawn	dwelt	meat	red	pen
drizzle	dweller	heat	wedding	pencil
drab		eat	begged	ten
drop		neat	looked	tent
drug		beach	edit	tend
drown		beat	ediface	enemy
drum		early		even
drink		earn		
		earth		
		tea		
		hear		
		head		
		east		

er	es	fl	fr	gl
her	best	fly	fry	glass
here	essay	fling	fringe	gleam
per	mess	flip	freeze	glare
era	pest	flap	froze	glaze
erg	horses	flour	free	glue
ere	porches	flag	fruit	glum
error	lesson	flat	frail	glory
ever	test	flame	fret	glimmer
every	press	flesh	frog	gland
very	less	flea	frost	wiggle
seer	guess			
maker				

gr	ha	he	in	io
grip	had	he	in	portion
grill	have	she	into	elevation
grab	hand	the	hinder	traction
grin	having	they	ginger	action
grape	shad	them	fin	section
greet	hamper	there	mind	attention
gray	shall	then	win	diction
green	aha	other	tin	friction
grease	hall	brother	pinned	intention
gripe	hair	here	binge	fraction
	has	her		
		head		
		hero		
		help		

is	it	le	nd	nk
his	it	apple	and	ink
miss	hit	isle	handle	think
sister	bite	lent	band	thank
dislike	smith	let	candy	rink
list	kitten	ale	mend	pink
mist	sit	leader	tend	stink
mister	lit	puzzle	end	rank
hiss	fitted	letter	landing	dunk
listen	write	leap	send	skunk
isle	write	lean	fund	mink
this	itself	leg		link
iris	itch	left		
is	edit	lei		

nt	of	on	or	ou
ant	of	on	or	ouch
antler	often	onto	nor	our
tent	lofty	one	tore	hour
lent	soft	ton	sore	sour
pant	offer	bone	bore	touch
rant	coffee	onion	for	pouch
mint	toffee	tone	orator	four
went	off	only	organ	pour
month	oftentimes	Monday	poor	out
tint	aloft	cone	forty	your
		once	oral	you
			ore	oust

ph	pl	pr	re	rt
telephone	place	pretty	are	tart
photo	please	present	red	mart
physician	plot	prepare	read	part
physics	apple	prep	ready	start
phonetics	plead	prefix	prepare	flirt
lymph	pleat	prof	treat	cart
phrase	plate	prosper	pretty	dirt
physical	plant	preview	real	shirt
phlox	plaid	prepaid	rare	heart
phosphate	plenty	precede	mare	curt

sh	sk	sl	sm	sp
ship	skate	slip	smear	spell
shall	skip	slide	small	spurt
hush	sky	slap	smart	lisp
sheep	skin	slur	smile	sport
shake	skill	sleep	smack	spring
mush	skirt	slight	smug	spry
shape	skit	slim	smoke	speak
sharp	ski	slumber	smuggle	sprout
shave	skim	slosh	smock	spool
share	skull	isle	smell	wasp
shell	ask		chism	clasp

st	sw	th	ti	to
stay	swam	the	tin	to
stem	swim	them	till	into
steer	sway	then	until	ton
street	swing	there	time	tough
string	sweet	their	tip	tote
stung	sweep	they	tight	too
strip	swell	other	tire	onto
last	swift	thing	tide	torch
waste	swat	think	tick	total
style	answer	that	ting	tore
first		with	untie	toll
		this		atop

tr	tw	ve	wh
try	tweed	have	when
trip	twice	brave	where
treat	twig	love	what
trim	twin	wave	why
trust	twist	save	while
troll	twelve	dove	white
trend	twitch	vend	which
travel	twine	veteran	wheel
trill	tweezers	vex	whisper
trial	twitter	vector	whether
tray	twilight	vermin	
entry		alive	

FOUR-LETTER WORD LISTS

Based on Commonly Used Three-Letter Sequences

ack	ake	alk	all	alt	and	ane	ang	ank
back	bake	balk	ball	halt	band	bane	bang	bank
tack	cake	calk	call	malt	land	cane	fang	lank
lack	fake	talk	fall	salt	sand	mane	hang	rank
rack	lake	walk	gall	alto	wand	pane	gang	sank
pack	make	Salk	hall		hand	sane	rang	tank
	rake		mall			vane	sang	
	sake		tall					
	take							
	wake							

ash	ast	ate	eak	eam	ean	eap	ear	eat
bash	cast	bate	beak	beam	bean	leap	bear	beat
cash	fast	date	leak	team	lean	heap	dear	feat
dash	last	fate	peak	seam	mean	reap	fear	heat
lash	mast	gate	teak	ream	wean	neap	gear	meat
mash	past	hate	weak		dean		hear	neat
rash	vast	late					lear	peat
sash		mate					near	seat
		rate					rear	
							sear	
							tear	
							wear	
							year	

een	eep	eet	elt	ent	ill	ine	ing	ink
been	beep	beet	belt	bent	fill	dine	bing	link
seen	deep	feet	felt	cent	gill	fine	ding	mink
teen	keep	meet	melt	dent	hill	line	king	pink
keen	peep	keet	pelt	gent	kill	mine	ping	rink
	seep		welt	lent	mill	pine	sing	sink
				pent	pill	tine	wing	wink
				rent	sill	vine	zing	inky
				sent	will	wine		
				tent	bill			
				vent				
				went				

ite	oat	ock	ome	one	ope	ore	ote	own
bite	boat	cock	come	done	cope	bore	note	down
cite	goat	dock	dome	lone	dope	core	rote	town
kite	coat	lock	home	bone	lope	fore	tote	gown
mite	moat	mock	some	gone	mope	lore	dote	sown
lite	oats	rock			rope	more	vote	
rite		tock				pore		
		sock				sore		
						tore		

PREFIXES AND SUFFIXES

Prefixes

de	dis	en	ex	con
defeat	disown	enjoy	exact	concur
detour	disobey	enlist	exceed	concede
deform	disagree	enact	excite	conclude
decade	dislike	enroll	excuse	confuse
demerit	disloyal	entitle	exhale	conform

com	in	pro	re	un
complete	inhale	proceed	recall	unable
comply	inside	project	renew	unfit
combine	indent	program	remake	untrue
compound	incorrect	produce	reopen	unlace
compact	informal	prolong	refresh	unpack

pre
preview
precede
prepay
prewar
prepaid

Suffixes

al	ance	able	ive	ful
postal	allowance	suitable	active	careful
optical	assistance	portable	detective	handful
critical	acquaintance	available	defective	painful
comical	disturbance	payable	destructive	helpful
personal	appearance	obtainable	excessive	joyful

Suffixes (continued)

y	tion	ing	ment	less
airy	action	being	payment	careless
rainy	adoption	ending	amazement	useless
rocky	edition	going	excitement	worthless
sleepy	election	earning	employment	helpless
frosty	direction	feeling	pavement	fearless

ness	ly	ous
blindness	sickly	joyous
darkness	kindly	dangerous
likeness	yearly	perilous
sadness	costly	poisonous
goodness	lively	pompus

EXAMPLES OF WORD BUILDING EXERCISES

A	A	A	A
AL	AL	AN	AN
ALL	AIL	PAN	AND
TALL	TAIL	PANE	ANDY
TALLY	TRAIL	PANES	CANDY
A	A	A	A
AN	AN	AS	AT
BAN	RAN	ASP	ATE
BAND	RANK	RASP	LATE
BLAND	FRANK	GRASP	PLATE
A	A	I	I
AT	AT	IT	IN
OAT	RAT	BIT	BIN
GOAT	RATE	BITE	BING
GLOAT	GRATE	BLITE	BINGE
I	I	I	BE
ID	IN	IN	BEA
SID	SIN	TIN	BEAR
SIDE	SINK	THIN	BEARD
ASIDE	STINK	THING	
ED	HE	NO	ON
RED	THE	NOT	ONE
REED	THEE	NOTE	LONE
GREED	THERE	NOTED	ALONE
GREEDY			
OR	TO		
FOR	TOP		
FORE	STOP		
AFORE	STOOP		

RHYMING WORD LISTS

ate	at	ton	in
rate	sat	son	tin
mate	mat	won	sin
date	hat	done	pin
plate	rat	none	thin
grate	that	one	shin
state	flat	fun	skin
great		pun	win
wait		sun	chin

heat	or	set	dine
meat	nor	net	line
seat	tore	let	mine
eat	bore	met	shine
treat	door	pet	whine
wheat	poor	fret	nine
sweet	shore	bet	fine
meet	store	wet	pine
tweet	pour		
	soar		
	floor		

"AND" WORDS

BAND	BLAND	CANDY
HAND	BRAND	DANDY
LAND	GLAND	CANDLE
SAND	GRAND	SANDAL
WAND	STAND	PANDA
WANDER	STRAND	VANDAL

"ING" WORDS

KING	BRING	FINGER
RING	FLING	SINGER
SING	STING	MINGLE
WING	STRING	SINGLE
	THING	TINGLE
	WRING	

SENTENCES EMPLOYING COMMONLY USED TWO-LETTER SEQUENCES

The clown slid and stumbled.

When the floppy-eared, brown hound growled, the children laughed with glee.

The clapping stopped short.

Ernest dropped in while you were talking on the phone.

Place your phosphate on the table.

Creepy, crawly creatures went winding around the trees.

He is silently sleeping.

Twelve of them have teeth.

COMMON-KEY EXERCISES

(These exercises are to be used only
after the entire "Cybercode"
has been taught)

COMMON-KEY LETTER COMBINATIONS

The following are letter combinations in which the fingering of the "Cybertype" code changes for only one hand. That is, in typing these letter combinations, the same key is depressed for each letter within a specific group (i.e. Control Key No. 1 is depressed for all combinations within Group A; Control Key No. 2 is depressed for all combinations within Group B, etc.)

Common Left-Hand (Control) Key

Group A	Group B	Group C
eo	sc	uf
et	sh	ub
ot	sl	ug
nt	sm	up
at	ch	gu
it	cl	pu
ai	dr	fu
in	rd	bu
ni		fy
ti		by
to		py
an		gy
te		
en		
on		
no		
tion		

The following is a series of letter combinations in which a common right-hand key is depressed for each group of paired letters (i.e. for "ur," right-hand key No. 1 is depressed for both letters; for "co,", right-hand key No. 5 is depressed, etc.).

Common Right-Hand Key		
ur	th	ad
es	ph	ay
ef	ng	day
co	ln	im
ob	gl	wi
oc	da	mi
		ix